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Lawrence Livermore National Lab., CA

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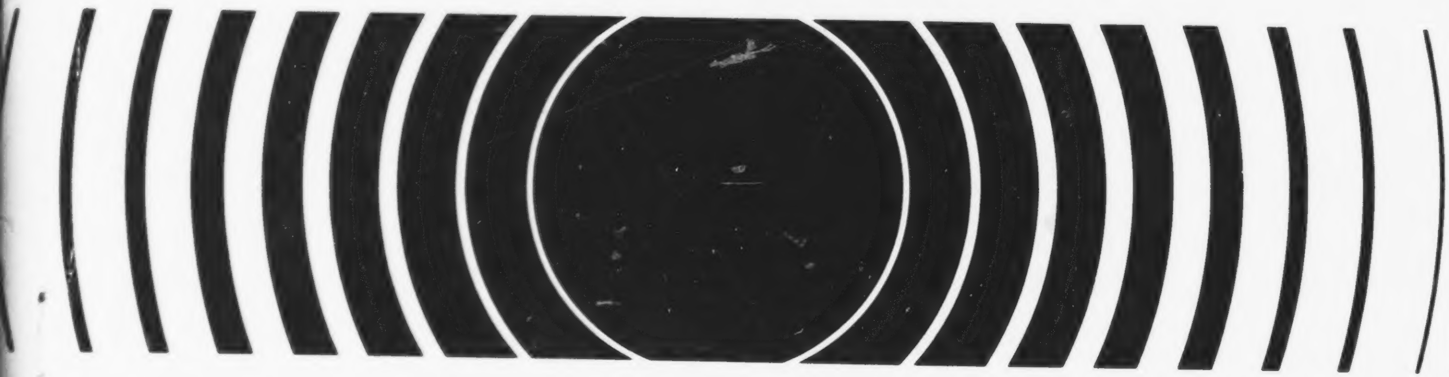
Volume 1: Report



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The purpose of this study is to estimate the cost of a federal guidance proposed by the U.S. Environmental Protection Agency (EPA) limiting public exposure to radiofrequency (RF) radiation from the broadcast industry--the 9000 AM and FM radio stations and 1000 VHF-TV and UHF-TV broadcast stations in the U.S.--that EPA research indicates is the most significant source of RF to which the public is exposed. The Lawrence Livermore National Laboratory developed models that estimate a variety of cost at 18 alternative guidance levels for three kinds of economic analysis: the cost to society-at-large, the cost to the broadcast industry and the cost to and effect on net profit of the average broadcast station. The total present (discounted) value of the cost to society varies from a maximum (high-cost assumption) of $866.6 million for guidance level 1 and drops very rapidly to guidance level 4 then rapidly to level 10 and more gradually to a minimum (low-cost assumption) of $12.7 million for guidance level 18. The maximum reduction in net profit from increased cash flow costs to the average broadcast firm over the assumed 6 years of costs varies from 16.4% (FM) at guidance level 1 to 0.1% (TV) at guidance level 18.

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AN ESTIMATE OF THE POTENTIAL COSTS OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM BROADCAST SOURCES

Volume 1: Report

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PREFACE

The purpose of the study reported here is to estimate the potential cost of a federal guidance proposed by the Environmental Protection Agency (EPA) limiting public exposure to radiofrequency (RF) radiation. An estimate of the economic effects of proposed federal actions is mandated by a series of Executive Orders (EOs), the latest of which is EO 12291, Federal Regulation, which is implemented by an Office of Management and Budget guidance on regulatory impact analysis and, in EPA, by a companion guideline for performing regulatory impact analyses. The federal radiofrequency radiation protection guidance has been developed by the EPA under the Federal Radiation Council Authority, 42 U.S.C. 2021(h), transferred to EPA by EO 10831, Reorganization Plan Number 3 of 1970 and by Public Law 86-373.

The EPA has conducted research over the past 12 years on the electromagnetic environment to which the public is exposed and on the propagation of RF by a wide variety of sources, the most significant of which are AM and FM radio, VHF-TV and UHF-TV broadcast stations. The cost study is limited to these significant sources of RF. One of the results of this study, in conjunction with EPA research, is a conceptual development of the type of mitigation measures necessary to effect compliance, as indicated by model results at 18 alternative guidance levels ranging from 1 $\mu W/cm^2$ (FM and TV) or 10 V/m (AM) to 10,000 $\mu W/cm^2$ (FM and TV) or 1,000 V/m (AM). The cost of compliance was estimated using a series of models that present a range (low, medium, and high) of costs to society-at-large, costs to the broadcast industry and costs to and effects on the net income of the average broadcast station. The costs are expressed in a variety of ways, including gross cost, net annual cash flow cost, average annual cash flow cost, and present value.

The report is organized into two volumes, the first a description of the study and a summary of results, the second a series of appendices containing an explanation and sample of the calculations for each of the three segments of the broadcast industry; the appendices also include detailed tabular and graphic descriptions of various cost estimates at each of the 18 guidance levels at the three cost levels. Volume I begins with a preface, executive summary, and abstract, followed by an introduction in which a discussion of the purpose and scope of the study lead to an extensive graphic presentation of conclusions supported by summary tables. Following this is a background section outlining the purpose for and current efforts to regulate RF radiation, public and industry concerns over RF and

its regulation, a brief review of the electromagnetic environment and of health effects research, a profile of commercial broadcast facilities and a discussion of the framework for regulatory (economic) impact analyses.

The next section describes the method of approach used in the cost study. Following this is a section describing the compliance measure concepts developed by the EPA and consultants as part of this study. The remaining section describes the cost models--social, industry, and average firm. All assumptions, including costs, application of compliance measures and financial parameters, are discussed throughout and summarized at the conclusion of Volume I for convenience.

Volume II contains three appendices, one each for AM and FM radio and TV broadcast stations, that present a step-by-step explanation of each of the calculations in the cost models. Those are followed by other appendices that present detailed estimates of the cost of compliance with 18 guidance levels at three cost levels, given in terms of the cost to society-at-large, the cost to industry, and the cost to the average broadcast firm; in addition, the number of stations requiring a compliance measure at each guidance level is given. The average annual cash flow cost and present value estimates are plotted for each of the three analyses (social, industry, and average firm) at three cost levels. These are supported by data in the tables, which also contain other cost analyses not plotted.

This two-volume report is one of a number of documents presenting research that was used to develop the proposed RF guidance and provide analyses for reviewers and decision makers considering it. A presentation of the engineering and health studies is contained in three reports published or in preparation by the U.S. Environmental Protection Agency. A review of over 5000 citations of health risks and biological effects of RF is given in U.S. Environmental Protection Agency, Biological Effects of Radiofrequency Radiation, J. A. Elder and D. F. Cahill Eds., Health Effects Research Laboratory, Research Triangle Park, North Carolina, EPA-600/8-83-026F, September 1984. A study of the engineering aspects of radiofrequency radiation is contained in Gailey, P. C. and R. A. Tell, An Engineering Assessment of the Potential Impact of Federal Radiation Protection Guidance on the AM, FM, and TV Broadcast Services, U.S. Environmental Protection Agency, Washington, D.C. (in press). A third report has been prepared on the radiofrequency environment: Hankin, N. N., The Radiofrequency Radiation Environment; Environmental Exposure Levels and RF-Emitting Sources, U.S. Environmental Protection Agency, Washington, D.C. (in press).

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EXECUTIVE SUMMARY

The purpose of this study is to estimate the potential cost of a federal guidance limiting public exposure to radiofrequency (RF) radiation; the study addresses the cost of compliance of the broadcast industry and its three major segments--the 9000 AM and FM radio stations and the 1000 VHF-TV and UHF-TV broadcast stations in the U.S. The cost of compliance was estimated in terms of three kinds of economic analyses, for which models were developed: the cost to society-at-large, the cost to the broadcast industry, and the cost to and effect on the net profit of the average broadcast station. For these analyses, estimates were made of the cost of 18 alternative guidance levels ranging from 1 μW/cm^2 (FM and TV) or 10 V/m (AM), the most stringent, to 10,000 μW/cm^2 (FM and TV) or 1000 V/m (AM), the least stringent, using a low, medium, and high estimate of the cost of components for compliance measures.

The federal RF radiation protection guidance analyzed in this study has been developed and proposed by the U.S. Environmental Protection Agency (EPA) under the authority of the Federal Radiation Council, 42 U.S.C. 2021 (h), which was transferred to the EPA by Executive Order (EO) 10831, Reorganization Plan Number 3 of 1970 and by Public Law 86-373. Accordingly, the Nonionizing Radiation Branch, Office of Radiation Programs of the EPA has conducted an extensive research program over the past 12 years on the electromagnetic environment to which the public is exposed. This research has included a number of studies of the propagation of RF by a wide variety of sources including shortwave (high frequency) radio, satellite communication earth terminals, point-to-point microwave radio antennas, various kinds of radar, land/mobile communications, and hand-held transceivers. This research indicates that the broadcast industry, FM radio and VHF-TV transmitters in particular, contribute the majority of RF to which the public is exposed in the general environment. Therefore, the EPA has focused on the broadcast industry as the most important foundation for a cost study and has developed models that estimate the RF energy deposition on the ground from AM and FM radio, VHF-TV and UHF-TV antennas. The models use a data base the EPA developed by combining information manually extracted from Federal Communications Commission engineering files with results of studies of the propagation characteristics of various commonly used antennas. Using these models the EPA has estimated the RF pattern and intensity of all 10,000 AM and FM radio, VHF-TV and UHF-TV broadcast stations. These RF propagation estimates were compared with the 18 specified guidance levels; for those stations estimated to exceed a given guidance level, a series of increasingly

complex, effective, and costly compliance measures was tried in succession until compliance was indicated by model results. This provided the engineering basis for the cost models.

An estimate of the economic effects of proposed federal actions is mandated by a series of Executive Orders, the latest of which is EO 12291, Federal Regulation, which is implemented by an Office of Management and Budget guidance on regulatory impact analysis and, in EPA, by a companion guideline for performing regulatory impact analyses. Accordingly, the EPA contracted with the Environmental Sciences Division of the Lawrence Livermore National Laboratory under EPA-DOE (Department of Energy) Interagency Agreement AD-89-F-2-803-0 to conduct the cost study.

The social cost models estimate the entire cost to society-at-large, defined as the opportunity cost of allocating resources for the purpose of reducing RF radiation at the exclusion of other uses, in terms of component and gross cost, annual cash flow (undiscounted) cost and present (discounted) value of the cost of the guidance. The industry cost models estimate the annual and average cash flow (undiscounted) cost and present (discounted) value of the cost of compliance. The average firm models estimate the annual gross cash flow (undiscounted) cost, tax shelter, net annual and average cash flow cost, net income after compliance and present value of the cost of compliance. The industry and average firm models produce results that are net of income tax deductions and credits and include the cost of financing the required compliance measures.

The results show that the cost of compliance in all three analyses drops very rapidly from guidance level 1 to 4, then rapidly from 4 to about 9 or 10, and then more gradually to level 18. The percentages of stations requiring a mitigation measure are 94% (FM), 100% (AM), and 76% (TV) at guidance level 1; at guidance level 18 the percentages requiring a mitigation measure are 1% (FM), 0% (AM), and 0% (TV). The present (discounted) value of the cost to society-at-large of compliance with the proposed RF guidance varies from a maximum (high cost assumptions) of $866.6 million for guidance level 1 to a minimum (low cost assumptions) of $12.7 million for guidance level 18. The annual cash flow (undiscounted) cost to society varies from $207.8 million to $3.1 million. The present value of the net after tax cost to the broadcast industry varies from $414.6 million to $6.9 million. The average annual net after tax cash flow cost to the broadcast industry varies from $59.1 million to $0.8 million. The average present value of the net after tax cost to the average broadcast firm varies from a maximum of

$40.6 thousand (FM), $7.9 thousand (AM), $285.3 thousand (TV) to a minimum of $4.8 thousand (FM), $1.3 thousand (AM), $0.7 thousand (TV). The average annual net after tax cash flow cost to the average broadcast firm varies from a maximum of $9.7 thousand (FM), $1.8 thousand (AM), $67.8 thousand (TV) to a minimum of $1.1 thousand (FM), $0.3 thousand (AM), $0.1 thousand (TV). The reduction in the net profit of the average broadcast firm from maximum cash flow expenses associated with compliance varies from a maximum of 16.4% (FM), 5.1% (AM), 8.4% (TV) to a minimum of 2.5% (FM), 1.4% (AM), 0.1% (TV). The reduction in the net profit from the average cash flow expense of compliance is about 50% of the maximum percent effect on profits.

ABSTRACT

The purpose of this study is to estimate the cost of a federal guidance proposed by the U.S. Environmental Protection Agency (EPA) limiting public exposure to radiofrequency (RF) radiation from the broadcast industry--the 9000 AM and FM radio stations and 1000 VHF-TV and UHF-TV broadcast stations in the U.S.-- that EPA research indicates is the most significant source of RF to which the public is exposed. The Lawrence Livermore National Laboratory developed models that estimate a variety of costs at 18 alternative guidance levels for three kinds of economic analysis: the cost to society-at-large, the cost to the broadcast industry and the cost to and effect on net profit of the average broadcast station. The total present (discounted) value of the cost to society varies from a maximum (high-cost assumption) of $866.6 million for guidance level 1 and drops very rapidly to guidance level 4 then rapidly to level 10 and more gradually to a minimum (low-cost assumption) of $12.7 million for guidance level 18. The maximum reduction in net profit from increased cash flow costs to the average broadcast firm over the assumed 6 years of costs varies from 16.4% (FM) at guidance level 1 to 0.1% (TV) at guidance level 18.

INTRODUCTION AND BACKGROUND

PURPOSE

The goal of this study is to assist the Environmental Protection Agency (EPA) in addressing the cost of regulation as mandated by Executive Order (EO) 12291[1], by Office of Management and Budget (OMB) guidance on regulatory impact analysis[2], and by EPA guidance on regulatory impact analysis.[3] To accomplish this goal, Lawrence Livermore National Laboratory (LLNL) has developed and applied a methodology to analyze the potential cost of a Federal guidance limiting public exposure to radio freqency (RF) radiation proposed by the EPA. At the time this analysis was conducted, important categories of benefits had been identified but not quantified.

The purpose of this study, to develop and apply a cost methodology, was carried out by developing models that estimate a variety of costs of compliance for three types of economic analysis: the cost to society-at-large, the cost to the broadcast industry, and the cost to and effect on the net profit of the average broadcast firm. Using the results of an engineering analysis provided by EPA,[4] we made estimates of the cost of 18 alternative guidance levels ranging from 1 $\mu W/cm^2$ (FM and TV) or 10 V/m (AM), the most stringent, to 10,000 $\mu W/cm^2$ (FM and TV) or 1,000 V/m (AM), the least stringent, using three levels of costs for compliance measure components. Among the costs estimated for each of the three analyses are component and gross compliance cost, projected actual and average annual cash flow (undiscounted) cost, and present (discounted) value. The average firm models estimate the net after tax effect of compliance on profit.

SCOPE

Anthropogenic sources of RF are many and are proliferating. Contributors to the general RF environment include point-to-point and earth-satellite communication system microwave broadcast antennas, military and civilian defense and navigation radar, land-mobile transmitters, hand-held transceivers, police traffic control radar, medical diathermy, commercial and residential microwave ovens, industrial sealers and heaters, shortwave radio, commercial FM and AM radio, VHF-TV and UHF-TV broadcast sources. Continued development of applications of RF energy in industrial processes and the communications industry such as the emerging low-power TV stations, cellular radio, and high-density TV, will increase the number of sources of RF. This study focuses on the existing commercial technology of the broadcast industry, because EPA's Office of Radiation Programs (ORP) research over the past 12 years indicates that this industry and FM and VHF-TV transmitters in particular are the most significant sources of RF to which the public is exposed.

RESEARCH RESULTS OVERVIEW

The EPA originally established 18 VHF field intensity levels as the basis of the economic study. The majority of the cost estimates were performed with the assumption that the frequency dependency of the guidance levels would be structured with the FM and TV limit (in $\mu W/cm^2$) established uniformly about 26.5 times more stringent than the AM limit for all 18 guidance levels studied. However, the EPA is now considering three alternative frequency-dependent guidance options: for option 1, the FM and TV limit (in μWcm^2) is 20 times more stringent than for AM; for options 2 and 3, the FM and TV limit is 200 times more strigent than for AM. The three alternative regulatory options thus have a different relationship between the limits applied to the AM band and those applied to FM and VHF-TV frequencies from the guidance levels used originally in the cost analysis. However, because each of the three broadcast services was analyzed independently at 18 different guidance levels, the total cost of any frequency-dependent standard can be estimated by combining the cost to each service at the guidance level applied to that service. The alternative guidance options currently under consideration for proposal by the EPA are structured for the three broadcast services as follows:

EPA Alternative Guidance Options

	Limiting field strength at AM frequencies V/m			Limiting power densities at FM and TV frequencies $\mu W/cm^2$		
	New guide option field strength	Nearest lower cost study field strength	Cost study guide level	New guide option field strength	Nearest lower cost study field strength	Cost study guide level
Option 1	87	86.6	5	100	100	6
Option 2	275	264.6	12	200	200	7
Option 3	614	446.7	16	1000	1000	15

Using the nearest lower, more expensive, guidance level when the new option falls between two guidance levels used in the cost study,[a] we estimated the social, industry, and average firm costs of compliance with the three new options. Figures 1-3 indicate the present value of the cost to society, industry and the average firm, respectively. The total present value of the cost to society varies from a maximum of $93.4 million (high-cost assumptions) for option 1 to $15.9 million (low-cost assumptions) for option 3 (Fig. 1). The total present value of the cost of compliance to the broadcast industry varies from a maximum of $45.6 million (high cost) for option 1 to $8.4 million (low cost) for option 3 (Fig. 2). The average present value of the cost of compliance for the average firm varies from a maximum of $22.0 thousand (FM), $2.6 thousand (AM), $70.3 thousand (TV) for option 1 (high cost) to a minimum of $6.4 thousand (FM), $1.3 thousand (AM), $23.1 thousand (TV) for option 3 (low cost) (Fig. 3). Data for these figures are presented in Tables 1-3. Additional estimates of costs to the average firm are shown in Table 3 and include the average net annual cash flow cost and the maximum and average reduction in profit.

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[a] Another approach is to interpolate between two guidance levels for which costs have been estimated. Using the next lower cost study guidance level is more conservative, overstating the cost somewhat.

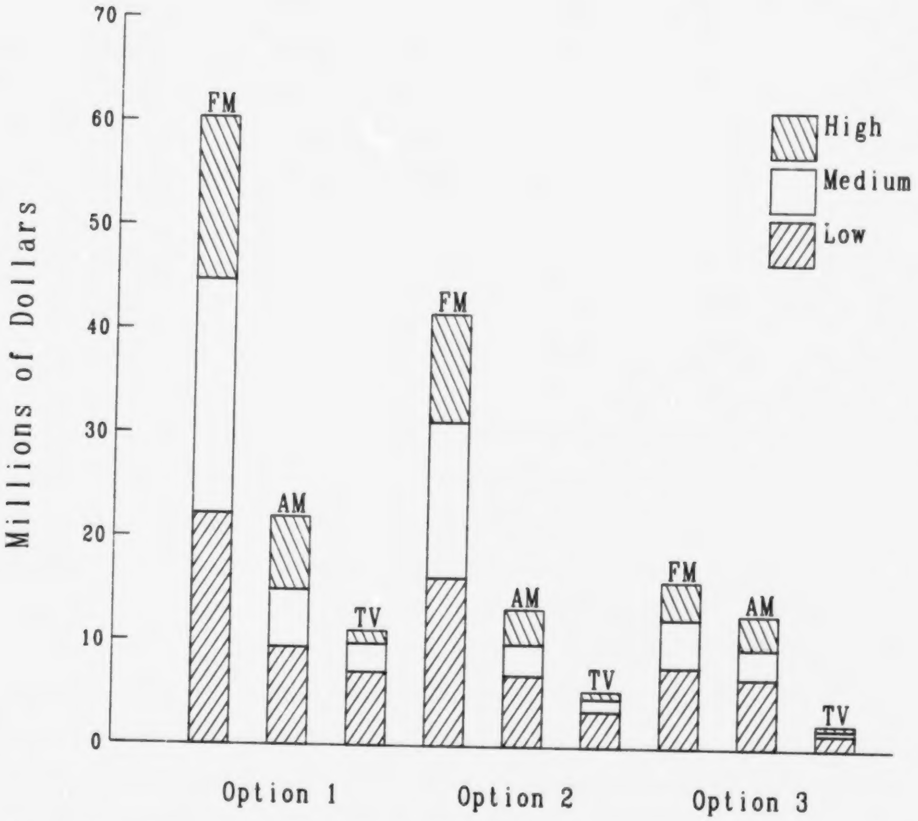

Figure 1. The range of the total present (constant dollar) value of the cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from FM, AM, and TV broadcast sources is shown for three possible guidance structures.

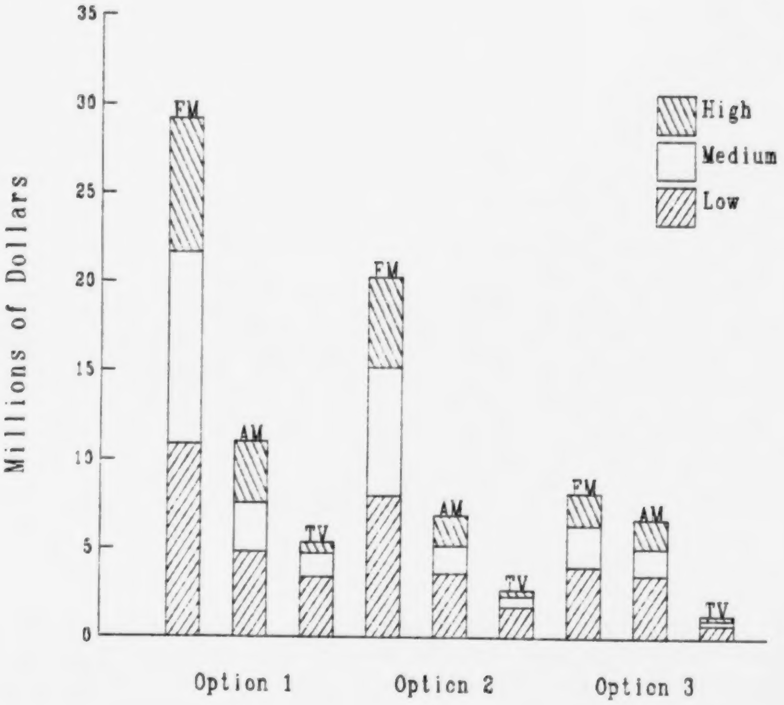

Figure 2. The range of the total present (constant dollar) value of the net after-tax cost to the broadcast industry of guidelines limiting public exposure to radiofrequency radiation from AM, FM, and TV broadcast sources is shown for three possible guidance structures.

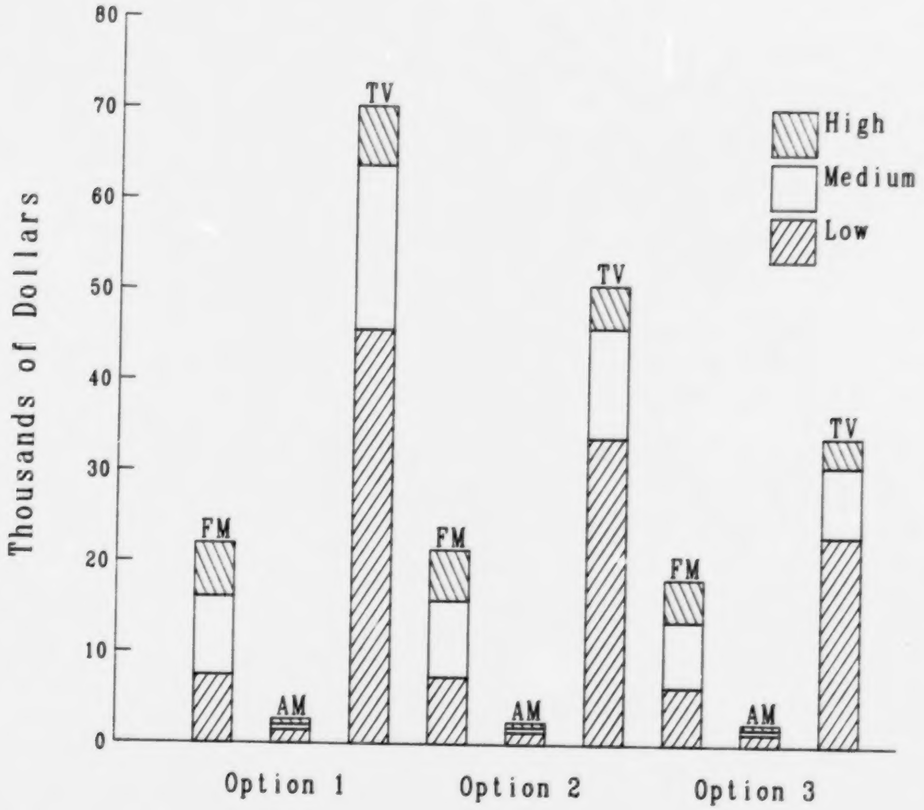

Figure 3. The range of the average present (constant dollar) value of the net after-tax cost to the average FM, AM, and TV broadcast station of guidelines limiting public exposure to radiofrequency radiation is shown for three possible guidance structures.

TABLE 1. AN ESTIMATE OF THE TOTAL PRESENT (CONSTANT DOLLAR) VALUE OF THE COST TO SOCIETY-AT-LARGE OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM FM, AM, AND TV BROADCAST SOURCES IS SHOWN FOR THREE POSSIBLE GUIDANCE STRUCTURES. NUMBERS ARE IN MILLIONS OF DOLLARS.

	FM			AM			TV			TOTAL		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
ALTERNATIVE 1	22.2	44.7	60.4	9.4	15.0	22.0	7.1	9.8	11.0	38.7	69.5	93.4
ALTERNATIVE 2	16.2	31.2	41.6	6.8	9.8	13.3	3.5	4.7	5.4	26.5	45.7	60.3
ALTERNATIVE 3	7.8	12.4	16.0	6.7	9.6	12.8	1.4	1.9	2.4	15.9	23.9	31.2

TABLE 2. AN ESTIMATE OF THE TOTAL PRESENT (CONSTANT DOLLAR) VALUE OF THE NET AFTER-TAX COST TO THE BROADCAST INDUSTRY OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM FM, AM, AND TV BROADCAST SOURCES IS SHOWN FOR THREE POSSIBLE GUIDANCE STRUCTURES. NUMBERS ARE IN MILLIONS OF DOLLARS.

	FM			AM			TV			TOTAL		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
ALTERNATIVE 1	10.9	21.7	29.2	4.8	7.6	11.0	3.4	4.7	5.4	19.1	34.0	45.6
ALTERNATIVE 2	8.0	15.2	20.3	3.6	5.2	6.9	1.7	2.3	2.7	13.4	22.7	29.9
ALTERNATIVE 3	4.0	6.4	8.2	3.6	5.1	6.7	0.8	1.0	1.3	8.4	12.4	16.2

TABLE 3. AN ESTIMATE OF THE POTENTIAL NET AFTER-TAX COST TO THE AVERAGE BROADCAST STATION OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM FM, AM, AND TV BROADCAST SOURCES IS SHOWN FOR THREE POSSIBLE GUIDANCE STRUCTURES. NUMBERS ARE IN THOUSANDS OF DOLLARS.

	FM			AM			TV		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
ALTERNATIVE 1									
AVG ANN CASH FLOW COST	1.8	3.8	5.2	0.3	0.5	0.6	10.8	15.1	16.7
AVERAGE PRESENT VALUE	7.5	16.1	22.0	1.4	2.0	2.6	45.6	63.7	70.3
MAX PROFIT DROP (%)	3.6	7.2	9.7	1.4	2.0	2.5	1.4	1.9	2.1
AVG PROFIT DROP (%)	1.8	4.0	5.4	0.4	0.6	0.8	0.8	1.2	1.3
ALTERNATIVE 2									
AVG ANN CASH FLOW COST	1.7	3.7	5.0	0.3	0.4	0.5	8.0	10.9	12.0
AVERAGE PRESENT VALUE	7.4	15.8	21.4	1.3	1.9	2.4	33.8	45.9	50.6
MAX PROFIT DROP (%)	3.5	7.1	9.5	1.4	1.9	2.4	1.0	1.4	1.5
AVG PROFIT DROP (%)	1.8	3.9	5.3	0.4	0.5	0.7	0.6	0.8	0.9
ALTERNATIVE 3									
AVG ANN CASH FLOW COST	1.5	3.2	4.3	0.3	0.4	0.5	5.5	7.3	8.0
AVERAGE PRESENT VALUE	6.4	13.6	18.3	1.3	1.8	2.4	23.1	30.8	34.0
MAX PROFIT DROP (%)	3.1	6.2	8.3	1.4	1.9	2.4	0.7	1.0	1.1
AVG PROFIT DROP (%)	1.6	3.4	4.5	0.4	0.5	0.7	0.4	0.6	0.6

STANDARDS LIMITING EXPOSURE TO RADIOFREQUENCY AND MICROWAVE ENERGY

There is a long history of serious concern over establishing standards for occupational and public exposure and product emissions of electromagnetic, or radio wave, energy.[5] The EPA, with the absorption of the Federal Radiation Council in 1970, has assumed authority over non-ionizing as well as ionizing radiation as an environmental parameter within its jurisdiction that has potential public health risks. This parallels a number of other agencies, public and private, that have a continuing interest in non-ionizing or radiofrequency and microwave (RF/MW) radiation energy. Since 1966, the American National Standards Institute (ANSI) has issued, and conducted scheduled revisions of, both occupational and non-occupational (public) RF/MW standards, the latest in August of 1983.[6] Figure 4 shows a comparison of selected RF standards including the previous and current ANSI standards.

The National Telecommunications and Information Administration (NTIA) within the Department of Commerce (DOC) has held responsibility for coordinating non-ionizing radiation bioeffects research. The NTIA was formed in 1978 when the Office of Telecommunications Policy was transferred from the Executive Office of the President to the NTIA. However, NTIA has recently decided to discontinue its bioeffects research coordination function. Its Electromagnetic Radiation Management Advisory Council, as a result, has been disbanded. The NTIA's spectrum policy, planning, and management function under the Frequency Management Advisory Council, all basically contributing to the DOC's fundamental mission to facilitate business, trade, commerce, and industrial production, will continue. The Department of Defense has initiated a review of its own exposure standards for RF/MW radiation. The American Conference of Governmental and Industrial Hygienists is also reviewing its RF/MW exposure standard.

The Occupational Safety and Health Administration published occupational RF/MW exposure standards until a recent decision to withdraw all such voluntary advisory standards.[a] The National Institute of Occupational Safety and Health has prepared a criterion document on the occupational health effects of RF/MW that has not been made public at this time.

In the international arena, the World Health Organization has published an RF/MW health effects criteria document that contains population, occupational, and product

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[a] This decision was reversed by OSHA in February 1984 at the request of the Federal Communications Commission (Microwave News, IV(2), March, 1984).

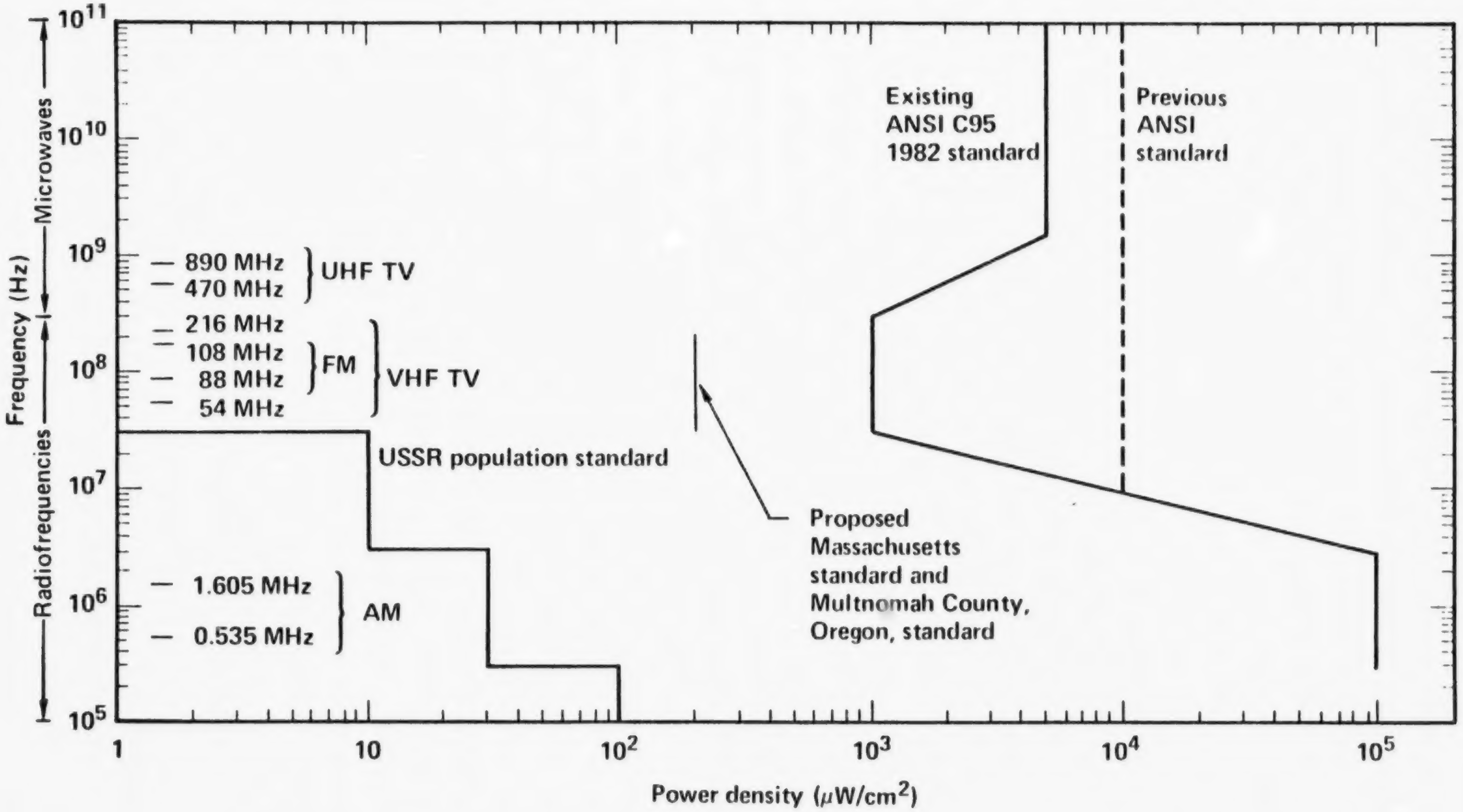

Figure 4. Radiofrequency and microwave energy spectra are shown with a number of population exposure standards.

standards, in addition to sections on implementation and further research needs. The International Non-Ionizing Radiation Committee of the International Radiation Protection Association has very recently published an occupational RF/MW exposure standard.

In the United States, the Technical Electronic Product Radiation Safety Standards Committee of the National Center for Devices and Radiological Health of the Food and Drug Administration is charged with recommending product emission standards for such appliances as microwave ovens and industrial heat sealers.

CURRENT REGULATORY EFFORTS

The Federal Communications Commission (FCC) has overall responsibility for licensing broadcast stations and maintaining acceptable broadcast/reception conditions and standards of service and otherwise regulating the broadcast industry. The FCC decided in 1979 that, under the National Environmental Policy Act (NEPA)[7] of 1969, it also had responsibility for public safety with regard to RF energy emanating from broadcast sources it is responsible for regulating. To this end, the FCC issued a notice of inquiry[8] followed by an Advance Notice of Proposed Rule Making (ANPR)[9] both of which solicited comments on the FCC's proposal to issue standards limiting public exposure to RF from regulated broadcast sources. The FCC has worked closely with the EPA, particularly the ORP, which is responsible for EPA's ionizing and non-ionizing radiation regulatory program. The EPA has also issued an ANPR[10] on its intention, in concert with the FCC, to publish a guideline limiting public exposure to RF/MW radiation. At the same time, the ORP is preparing a preliminary draft of the Federal Guidance for public exposure to RF to be implemented and administered by the various pertinent Federal agencies. An interagency work group has reviewed the Draft Proposed Guidance.[11] Further, the EPA's Office of Research and Development Health Effects Research Laboratory has prepared a draft of a health effects criteria document.[12] This draft has been reviewed by a Scientific Advisory Board (SAB) panel and has been revised at the direction of the SAB.

THE ELECTROMAGNETIC ENERGY ENVIRONMENT

Communications, entertainment, recreation, manufacturing, food processing, medicine, defense, navigation, and space exploration have all benefited from advances in the use of RF/MW over the past 40 years. The public is exposed to intermittent or continuous RF/MW sources from a growing variety of sources: AM and FM radio and television broadcasting stations; navigation and defense radar; land-mobile (citizens band, emergency services, telephone); hand-held transceivers; police traffic control radar; point-to-point, earth-satellite, and deep space microwave communications; medical diathermy; commercial and residential microwave ovens; and industrial RF/MW sealers and heaters.

Radiowaves are electromagnetic energy consisting of coupled electric and magnetic fields that oscillate at the same frequency as the source, from which they propagate outward at the velocity of light in the medium through which the energy is moving. The relationship between the frequency, f, and wavelength, λ, for electromagnetic waves is approximately as follows:

$$\lambda = s/f , \qquad (1)$$

where

λ = the wavelength in meters,

s = speed of light in air, meters per second, and

f = the frequency in Hertz or cycles per second.

The EM energy spectrum extends from zero to 10^{25} Hz and includes the electrical frequency (low cycles per second), radiofrequency, optical frequency, and ionizing frequency ranges. Radiofrequency and microwave radiation includes the spectrum from 3 kHz to 300 GHz, with wavelengths varying from 100,000 m to 1 mm. Microwaves are defined as the portion including the spectrum between 300 MHz and 300 GHz, with wavelengths from 1 m to 1 mm.

The RF environment includes fields from many sources and frequencies. However, two frequency bands deliver the majority of the energy to which the public is exposed, the AM radio band, 0.535 to 1.605 MHz, and the FM radio, VHF and UHF TV bands, 54-890 MHz. A report analyzing the radiofrequency radiation environment to which the public is exposed and a discussion of the RF sources responsible has been prepared by the EPA.[13]

RESEARCH ON BIOLOGICAL EFFECTS AND HEALTH RISKS OF RADIOFREQUENCY/MICROWAVE RADIATION

Research on biological effects and health risks of RF/MW evidences long-standing, widespread, and diverse concern over the possible consequences of exposure to RF/MW radiation. This research dates from at least World War II when the U.S. Naval Research Laboratory investigated the possible harmful effects of microwaves. In 1948, researchers at the Mayo Clinic documented the first hazardous effect--cataracts in dogs used as experimental subjects.[14] Soviet researchers reported behavioral and subjective symptomatic effects at about the same time. In 1953, a Hughes Aircraft Company engineer, John T. McLaughlin, documented an apparent pattern of disease among radar workers. In reaction to this development, the Navy established a temporary exposure standard for MW. In 1956, the Armed Services initiated a more rigorous research effort known as the Tri-Services Program to establish a scientifically-based RF/MW standard.[15] ANSI assumed responsibility for setting voluntary standards and has a scheduled review of its standards every five years. Subsequently, a number of federal agencies became interested in RF/MW from an occupational, public exposure, and product emission standpoint. Currently, biological effects and health risk research is being monitored, funded, coordinated, or conducted by several agencies, among them the Office of Naval Research, the Air Force School of Aerospace Medicine, Center for Devices and Radiological Health (Food and Drug Administration), the National Institute of Environmental Health Sciences, the Environmental Protection Agency, the Department of Energy, and the Naval Medical Research and Development Command (Naval Aerospace Medical Research Laboratory).

Recently, the EPA evaluated the available scientific data in a report entitled Biological Effects of Radiofrequency Radiation.[12] Although there are over 5000 citations in the literature of studies of RF radiation effects, reports were included in the document only if they met certain minimum acceptance criteria and if they could be useful in developing the basis for exposure guidelines by adequately identifying and quantifying the biological and health effects.[16]

CONCERNS OF THE BROADCAST, COMMUNICATIONS, AND ELECTRONIC EQUIPMENT INDUSTRIES

Industry concerns focus on growing public resistance to siting communication and broadcast facilities in local communities. Industry is also concerned with having to satisfy state and local RF/MW public exposure standards that may be established at different levels that may be unnecessarily stringent because these agencies lack the facilities or funds to conduct the necessary scientific studies on which to base carefully designed standards. However, state and local officials feel compelled to respond to constituencies that express a growing perception of health risk from RF/MW exposure. Electronic equipment manufacturers are also concerned over product emission safety standards, a subject which this economic study does not address.

Numerous companies and industrial organizations have urged the EPA and FCC to adopt RF/MW standards in hopes of allaying public fears of perceived health risks. Among these are the American Telephone and Telegraph Company, American Satellite Company, GTE Service Corporation, TV Broadcasters All-Industry Committee, National Association of Broadcasters, Association for Broadcast Engineering Standards, Columbia Broadcasting Systems, Motorola Corporation, American Radio Relay League (Amateur Radio Organization), Doubleday Broadcasting, and even state and local officials who must address citizen concerns over RF/MW exposure.[17]

The public's growing perception of the risk of health hazards from RF/MW is causing increasing local opposition to the siting of communication and broadcast facilities, according to a communications and electronics research/industry newsletter.[18] This opposition appears to have originated with the rejection of Home Box Office corporation's application for a communications satellite (comsat) facility by Rockaway Township, New Jersey. Subsequently, RCA Americom was denied permission to build a comsat facility on both Bainbridge Island and in Indianola-Kingston (Kitsap County), Washington. The Port Authorities for New York and New Jersey and Merrill Lynch Pierce Fenner and Smith are proposing a teleport facility on Staten Island in the face of public opposition. Filmways Communications has been denied permission to build a television broadcast station in Onondaga, New York. U.S. Telecommunications Systems (an ITT subsidiary) was denied a permit to build a microwave relay station in Coventry, Connecticut. World Christian Broadcasting Corporation is facing severe opposition to its proposed shortwave station in Anchor Point, Alaska. Vernon, New Jersey, denied RCA Americom permission to build a microwave relay uplink station for its satellite communication center. Alascom Corporation is facing opposition to a comsat facility on Vashon Island (King County), Washington. ITT Corporation has been denied permission to build a point-to-point microwave relay station in South Nyack, New York, and faces organized opposition to its alternate site proposal for Ringwood, New Jersey. Group W Satellite Communications Corporation is facing opposition organized by the Citizen's Action Group to a comsat facility in Stamford, Connecticut. There has been long-standing opposition to the Navy's installation of large antenna systems required by its submarine communication system (known successively as Project Sanguine, Seafarer, and now, ELF) in Clam Lake, Wisconsin, and K.I. Sawyer Air Force Base in Michigan. Recently, the Coast Guard faced opposition to an OMEGA radar antenna facility in Hawaii. In addition, there is a growing body of litigation concerning alleged health effects of exposure to RF/MW.

In response to public fears of perceived health hazards from RF/MW, a number of state and local agencies have initiated studies and several are in the process of, or have adopted, RF/MW public exposure standards. Among the latter are Multnoma County, Oregon, the states of New Jersey, Conneticut, Wisconsin, Massahusetts, Texas, and

Arizona, and the cities of Portland, Oregon and Onondaga, New York.[19] Industry is concerned about technical compliance with differing local standards involving an energy medium that is difficult to control with respect to jurisdictional boundaries. Federal, state, and local government agencies are concerned about enforcement difficulties in a regulatory environment of multiple RF/MW public exposure standards.

The electronic equipment manufacturing industry is further concerned with the growing volume of litigation dealing with alleged health effects from products including microwave and radar antennas, microwave ovens, and video display terminals.

PURPOSE OF STANDARDS LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY/MICROWAVE ENERGY

The EPA, observing the conjunction of numerous forces, including long-standing scientific interest in the biological effects and health risks, increasing public perception of health hazards, industry concern over siting, the desire for consistency among differing local and state standards, and increasingly vocal opposition and litigation, is completing research necessary to establish a standard limiting public exposure to RF/MW radiation. The research is comprehensive in scope, including health effects, cost studies, field measurements of the electromagnetic environment, signal propagation studies, and studies of the efficacy of a wide variety of compliance measures, some of which have been designed and modeled during the course of this research.

PROFILE OF BROADCAST FACILITIES

The broadcast industry is large and growing, as the following statistics reveal;[20] total assets in 1980 were $5.5 billion, about 65% of which is in the TV industry. The total industry employs about 126,000 people who earn an aggregate wage of $3.1 billion. Industry gross revenues were about $12.0 billion (73% TV); net (after taxes) income was $1.8 billion (92% TV). In the decade 1971-1981, the number of FM radio stations increased by 47%, AM stations by 8% and TV stations by 11%. A general reason for this growth is seen in a study of the number of trillion words transmitted by public media.[21] This study tracked trends in the volume and cost of words transmitted by 17 media. More words were transmitted by radio (AM and FM) and were the least costly of any of the media. Radio and television grew in number of words transmitted and in reduction of cost by about the same percentage over the period of 1960 to 1977; however radio continues to transmit about 3-1/2 times as many words (5.5×10^{17}) as TV at one tenth the cost per word ($\$3.0 \times 10^{-9}$).[a] Of the voice communication media, as distinct from data communication, CATV grew twice as fast in number of words produced over the same period but transmits almost 20 times fewer words than TV at ten times the cost per word.

The physical facilities of an FM radio station vary but typically include a broadcast studio/office, from which the program content is assembled for transmission (Fig. 5). The broadcast antenna is often located on a tower at the studio site. If so, the broadcast material is conveyed over wire directly to the transmitter, which provides the power to the antenna. Power from the transmitter is usually conveyed to the antenna via a coaxial transmission line and fed to each element of the antenna (called a bay) through an electrical coupler or feed system that distributes and phases the signal for each bay. A studio-transmitter-link is used to broadcast the program material to the transmitter-antenna when the latter is remote from the broadcast studio.

Antenna signal patterns are routinely "tuned" or shaped to avoid interference with another station's signal, to direct the signal to the greatest population, to fill in nulls or poor reception areas, or to avoid broadcasting a signal to non-market areas, the ocean, for example. The signal shaping is accomplished in different ways for AM, FM, and TV. The factors for all three, though, involve the geometry of the element design, spacing, and placement, tower design and geometry, and signal phase control.

A broadcast station is a complex interaction of several forces that together result in the public image of a station that is dynamic, fluid, and curiously life-like as few other organizations are. The owners/partners/ managers bring the entrepreneurial spirit to the enterprise. Before the expansion of the FM car stereo market, this often flew in the face of continual losses and required a dedication to a particular type of programming and character of station, e.g., classical or jazz music.

The FM broadcast industry is undergoing a period of rapid change and expansion that began about a decade ago, spurred by expanding FM audiences. The enormous increase in FM listeners is the result of a conjunction of three trends. First, there have been significant improvements in the quality of recording, transmitting, and receiving equipment that have raised the standards and expectations of listeners for high quality sound, particularly for music. Second, good FM receivers are now widely available as standard equipment, dealer-installed option, or after-market installation for automobiles. This brings job-holding commuters--key targets of radio advertising campaigns--into the prime 6-9 a.m. listener period, greatly increasing the potential advertising revenue for FM

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[a] 1972 dollars.

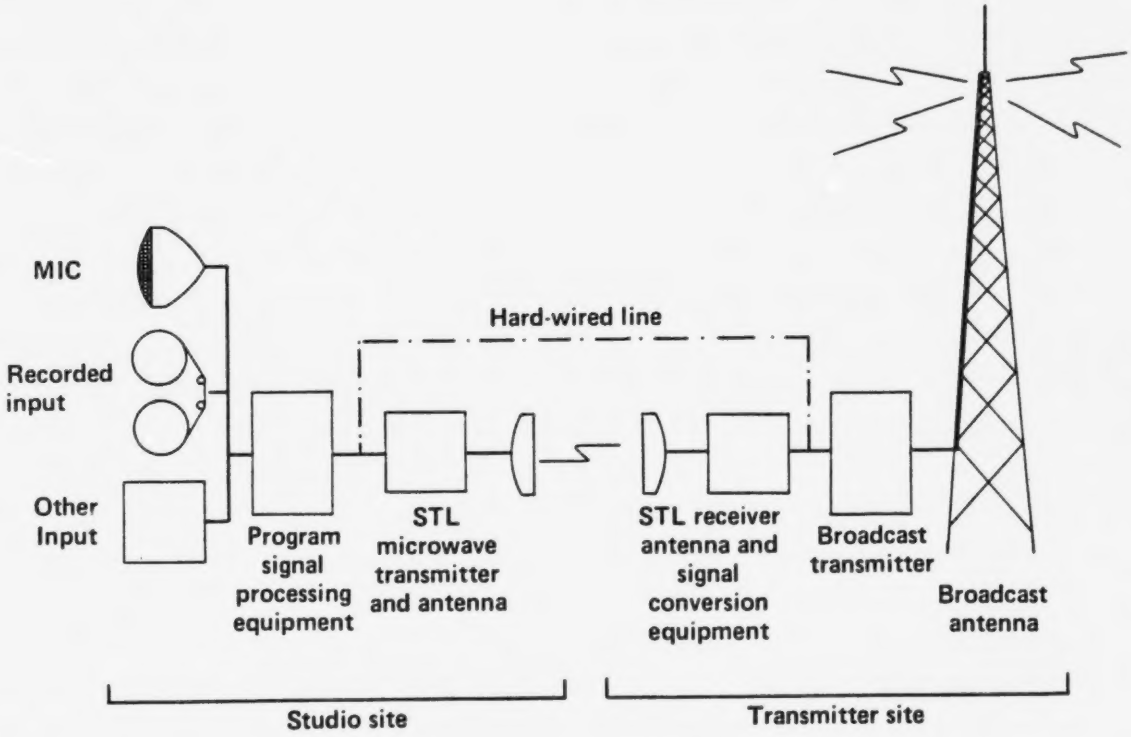

MIC
Recorded input
Other Input
Hard-wired line
Program signal processing equipment
STL microwave transmitter and antenna
STL receiver antenna and signal conversion equipment
Broadcast transmitter
Broadcast antenna
Studio site
Transmitter site

Figure 5. The elements of a broadcast system are shown with the ultimate signal carried from the transmitter via coaxial cable and broadcast from the antenna, which is insulated from the tower. FM radio, VHF-TV and UHF-TV antenna systems are similar. AM antenna systems differ in that the whole tower is used as a signal radiating element; the tower is electrically grounded with a system of radial copper wires.

radio stations. Third, FM programming, following the growth in audiences and advertising revenues, has greatly diversified and expanded. FM stations air a wide variety of programming and they also segment the listener market into increasingly smaller, specialized fractions. One result of this growth is that the market price for FM stations has jumped by as much as a factor of 10 in the past decade.

With the growth in the FM market and the tremendous surge in the cost of FM stations, there is a greater emphasis on the balance sheet. In 1971, 35% of independent FM stations reported a profit; in 1980, 50% were profitable.

The rapidly inflating market prices for FM stations, a function of the growth in FM listenership, the increasing scarcity of good broadcasting sites in lucrative markets, and tax laws have created a situation in which market appreciation and realization of income taxed at lower rates, e.g., long term capital gains, assume dominant importance. This accounts, partly, for the fact that 50% of independent FM stations tolerate operating losses in the current economy.

A station's value is not solely a function of current earnings, market share, audience size, or gross revenues. A major factor is potential earnings, which are primarily a function of potential audience size and demographic description of the population in the region. The area of dominant influence, usually larger than the FCC-defined market area, is influenced by two factors: signal strength, and audience draw (determined chiefly by the underlying demography of the potential audience and the programming). If the potential audience is sufficiently large and has the appropriate demographic profile, a station's market share can often be increased by changes in programming.

The programming function really establishes the character and image of the station with listeners. Station images have become fairly standardized; the industry uses commonly understood image or market categories such as easy listening, rock and roll, country and western, soul, jazz, classical, talk, and top 40 to report sales and revenue statistics, demographic and market trends. According to programming specialists, the type of programming is probably the most significant determinant of the demographic description of a station's listener audience.

The engineering people keep the station on the air and design or hire consultants to design new equipment configurations. Engineers emphasize the importance of maintaining maximum power to saturate the audience and keep the signal quality high. In fact, the FCC requires stations to maintain a minimum signal strength of 60 dbu (1.0 mV/m) over the broadcast coverage area and 70 dbu over the city of license.

The marketing and sales staff sell advertising time, which is the sole source of revenue for a station. Generally, radio advertising is a relatively inexpensive way to reach a wide audience. However, the marketing people also like to emphasize a station's power or height of antenna or size of market to attract advertisers. Stations generally like to maintain a balance among the three sources of sales revenues: national, regional, and local. Small stations tend to rely on national sales representatives and the size of broadcast coverage area (area and population) rather than on ratings to sell national time.

The radio personalities convey the station image and character along with the programming and can greatly influence listener audience share and advertising revenues. Programs and radio personalities are continually rated by one of the audience sampling services. The rating and audience share influence ad rates for a show, time segment or station. Hence, the competition for high ratings and shares is intense, especially in competitive radio markets such as Los Angeles, New York, and San Francisco.

Radio stations, with all of their dynamic elements, operate within the regulatory framework maintained by the FCC. The FCC is generally responsible for assuring that each station has an interference-free broadcast coverage area. This is accomplished by regulating the effective radiated power (ERP), which is a function of transmitted power and antenna gain; antenna height; and geographic separation from other stations. Recently, the FCC has been affected by a general move in the federal government toward deregulation of industries; as a consequence, there may be some deregulation of the broadcast industry in the future.

When a station applies for its first license to broadcast or applies for a permit to change its broadcast components, a wide variety of permits, each with its underlying engineering study is necessary. These may include a mileage separation, field strength, and population density study. The Federal Aviation Administration (FAA) requires a permit and accompanying study for many tower installations. Many of these studies are required as part of the compliance measures discussed further in this report. In addition, local jurisdictions require studies supporting land use permit and zoning applications.

Other changes affecting the broadcast industry include the planned introduction of AM stereo, cellular radio, high-definition television, and low-power television. These are not expected to have any influence on the RF environment to which the public is exposed.

Television stations are more capital intensive than FM stations; expenses are higher but the potential profits are very high, particularly in large metropolitan markets. The series of photographs (Figs. 6-9) show studio and transmission facilities of FM radio and

Figure 6. Material is broadcast live, prerecorded, or recorded live from the field.

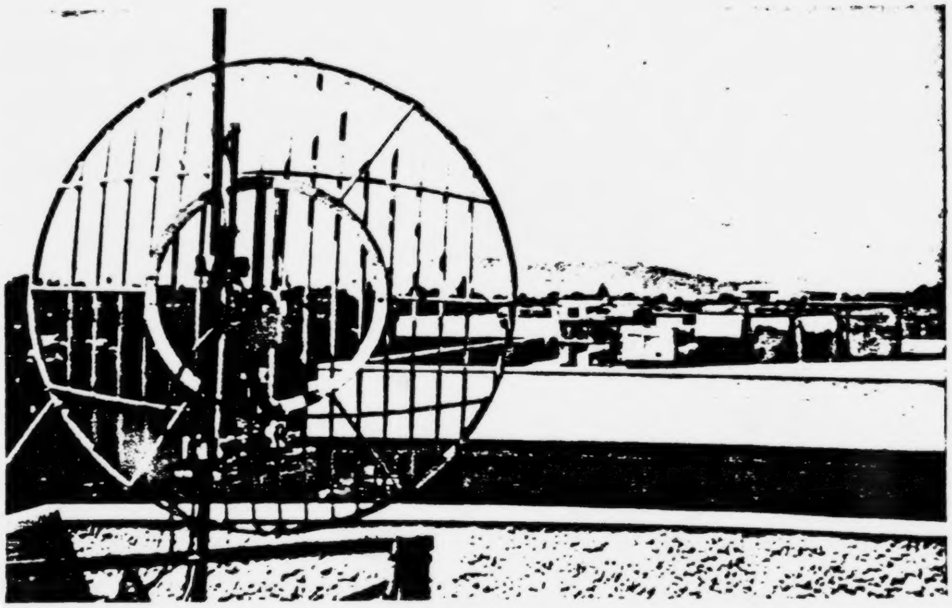


Figure 7. The signal is conveyed from the studio to a remote broadcast tower via a microwave studio-transmitter link.

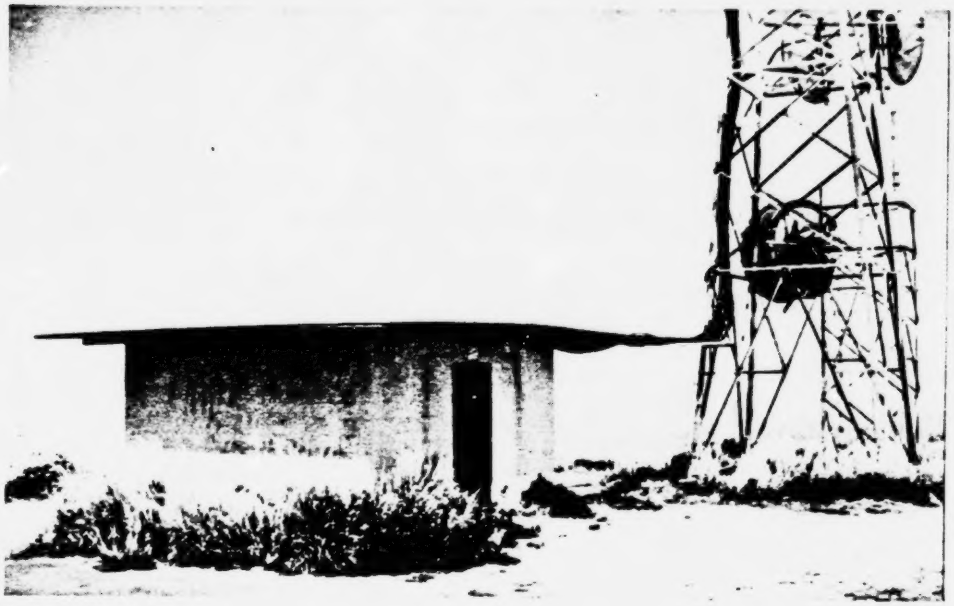


Figure 8. The studio-transmitter signal is received by a microwave dish antenna, converted to broadcast power at the transmitter, and fed to the broadcast antenna via coaxial cable.

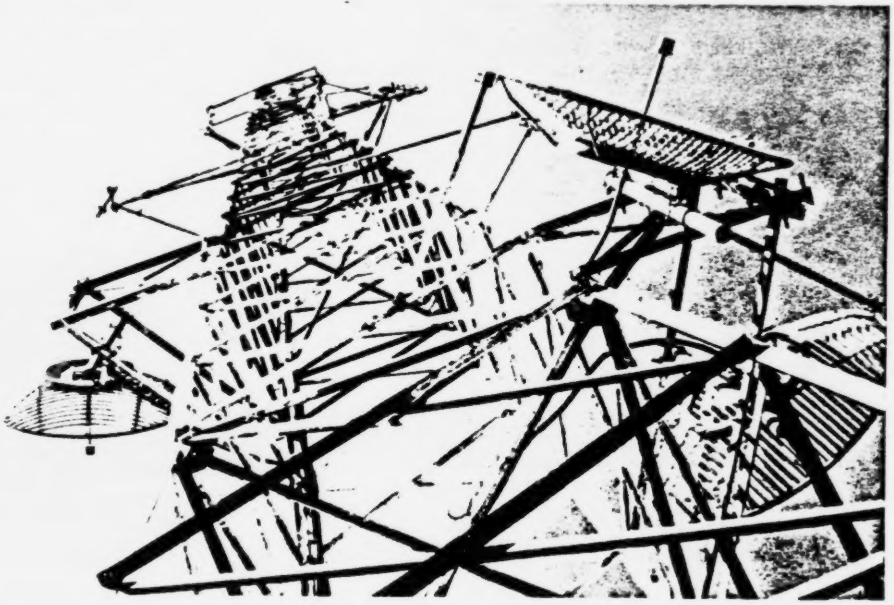


Figure 9. The coaxial cable feeds broadcast antennas on the tower (not visible above the catwalk).

television stations. Sutro tower, in San Francisco (Figs. 10-12), is a sophisticated system serving a number of television and FM stations and private land-mobile systems. An AM system is shown in Figs. 13-14.

AM radio station antennas typically have a configuration similar to that shown in Fig. 13. These antenna systems do not lend themselves easily to modification as do FM and TV antennas. Therefore, prohibiting public access by fencing the area near the antenna that is exposed to RF over-standard was used as the compliance measure for those AM stations that required some form of mitigation. Figure 14 shows a three-tower AM antenna system.

FRAMEWORK FOR THE ECONOMIC STUDY

Cost-benefit analysis (CBA) dates from the 1844 publication of an essay, "On the Measurement of the Utility of Public Works," by Jules Dupoit.[22] Dupoit conceived the notion of consumers' surplus, which is related to the concept of willingness to pay, and net social benefit, cornerstone principles of CBA.

More recently, the United States Flood Control Act of 1936 required that benefits of federal projects should exceed costs.[23-24] Thereafter, most federal public works agencies, notably the Corps of Engineers, used CBA to assess project worth throughout the next 40 years. Since the 1960's, especially following the enactment of NEPA in 1969, many statutes have been adopted that require some form of formalized decision making that balance beneficial and adverse effects or financial and social impacts.[25] During the Ford Administration, two EOs were promulgated requiring some form of economic balancing calculus.[26] President Carter further formalized these requirements in EO 12044,[27] which defined the threshold size of federal projects requiring analysis and the requirement for a regulatory analysis. This EO was supplanted by President Reagan in EO 12291,[28] which clearly identifies maximization of net social benefits as an objective of regulation. The EO mandates a Regulatory Impact Analysis for every major rule, defined as any regulation that is likely to result in:

1. an annual effect on the economy of $100 million or more;
2. a major increase in costs or prices for consumers, individual industries, federal, state, or local government agencies...; or
3. significant adverse effects on competition, employment, investment, productivity, innovation...[29]

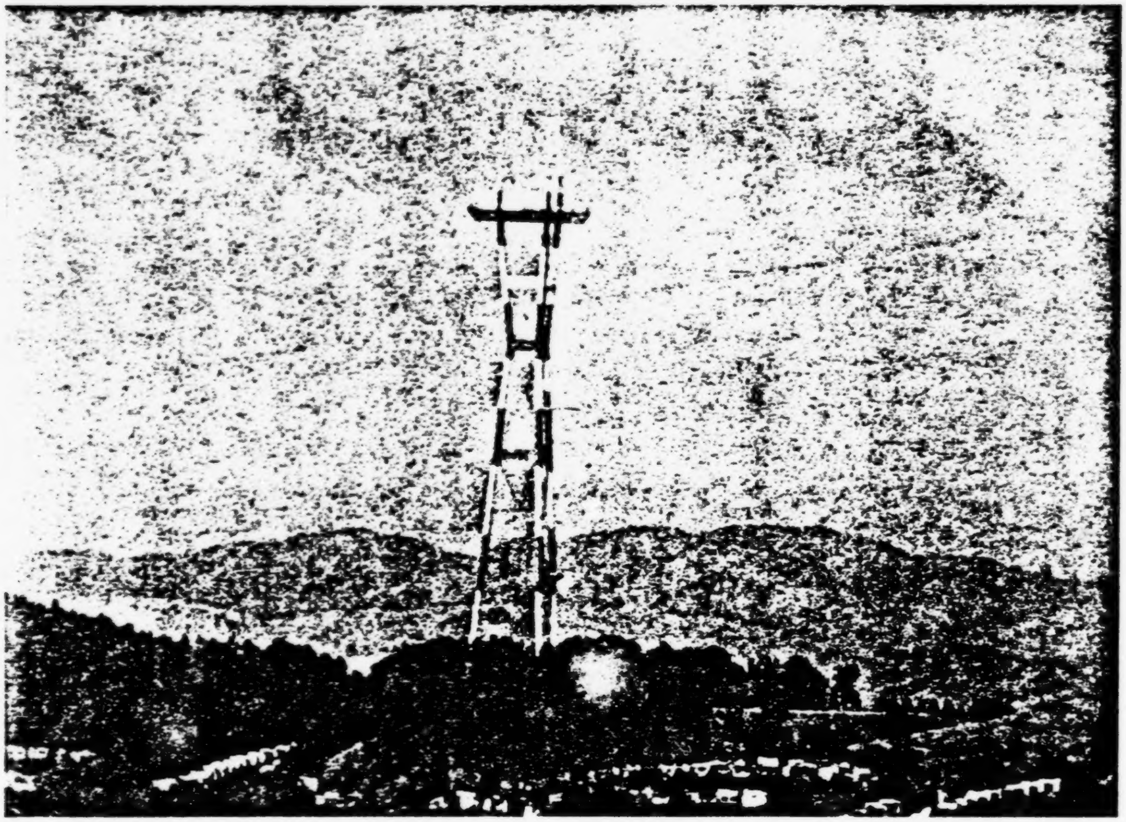
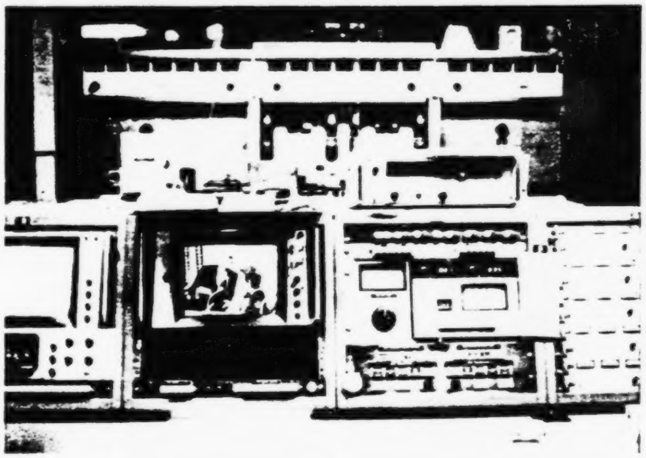
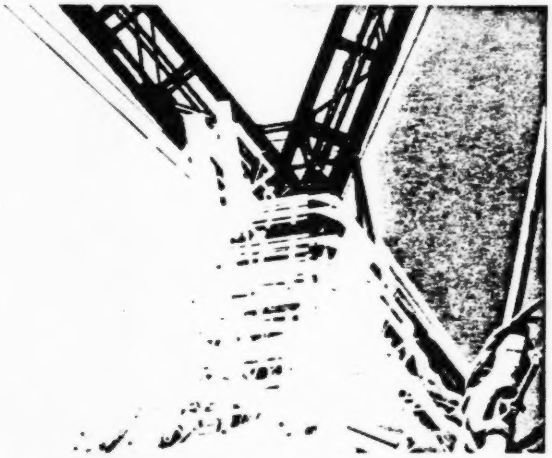


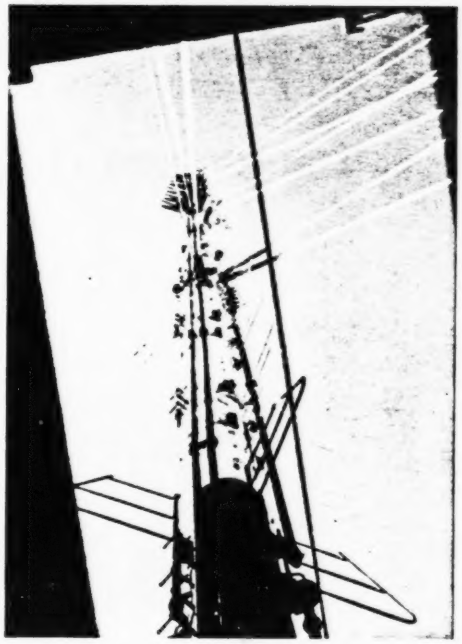
Figure 10. A sophisticated broadcast antenna system, such as this one in San Francisco, accommodates a number of television and FM broadcasters and land-mobile users. The tower is 977 feet above a hill that is 834 feet above sea level.



b. Television transmitter and monitor.

a. Microwave antenna.

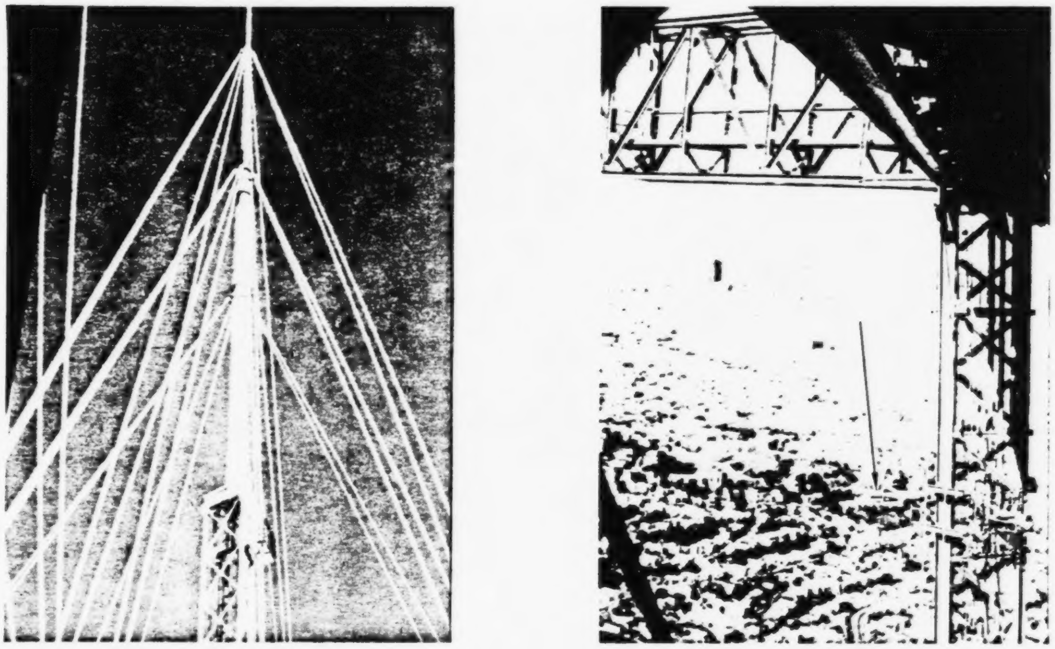




c. Circularly-polarized antenna.

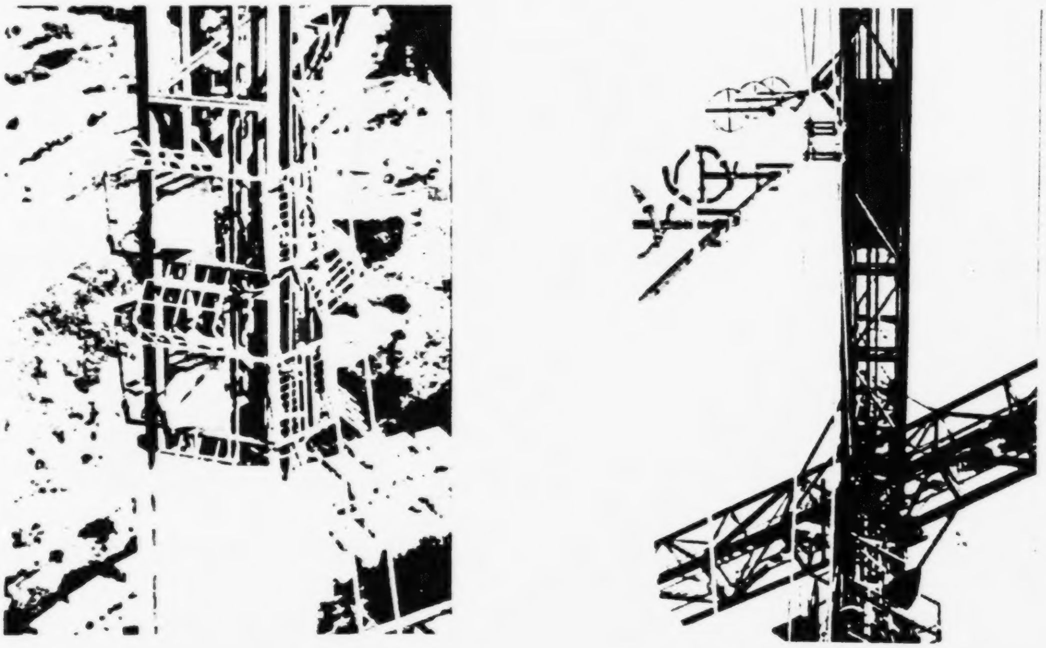
d. Batwing superturnstyle antenna.

Figure 11. The large tower system in San Francisco accommodates a variety of antennas and includes sophisticated transmitter-monitoring systems.



a. Traveling wave slotted antenna (very top of mast).

b. Circularly-polarized antenna (1/3 up left side of tower leg).



c. Antennas protected by radomes.

d. Circularly-polarized television antennas.

Figure 12. The large tower system in San Francisco serves additional antennas.

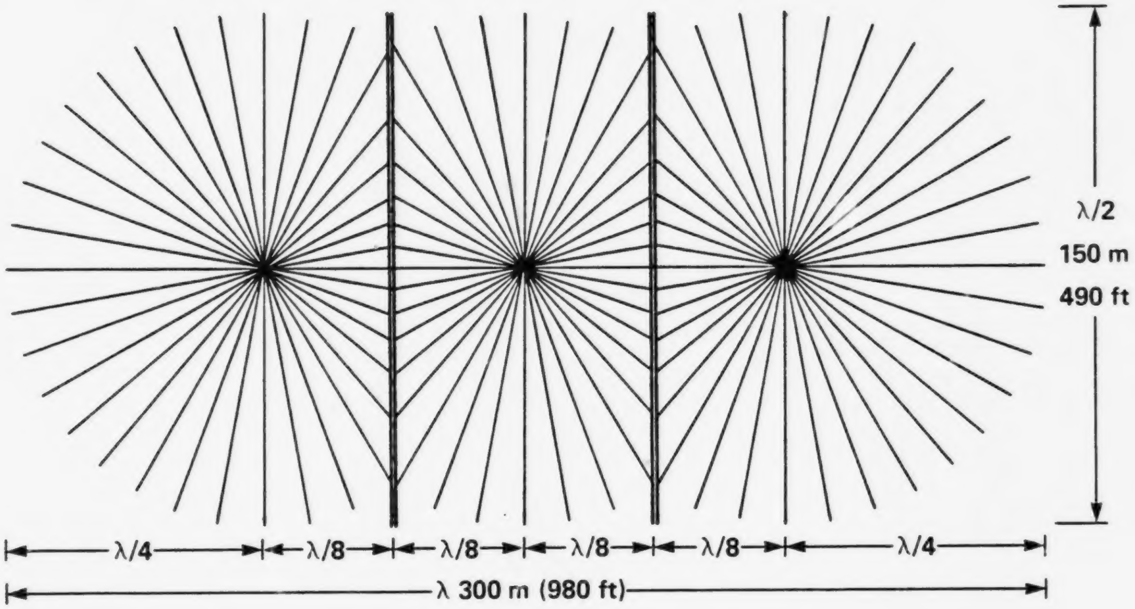


Figure 13. Typical AM antenna ground field (broadcast frequency = 1000 KHz).

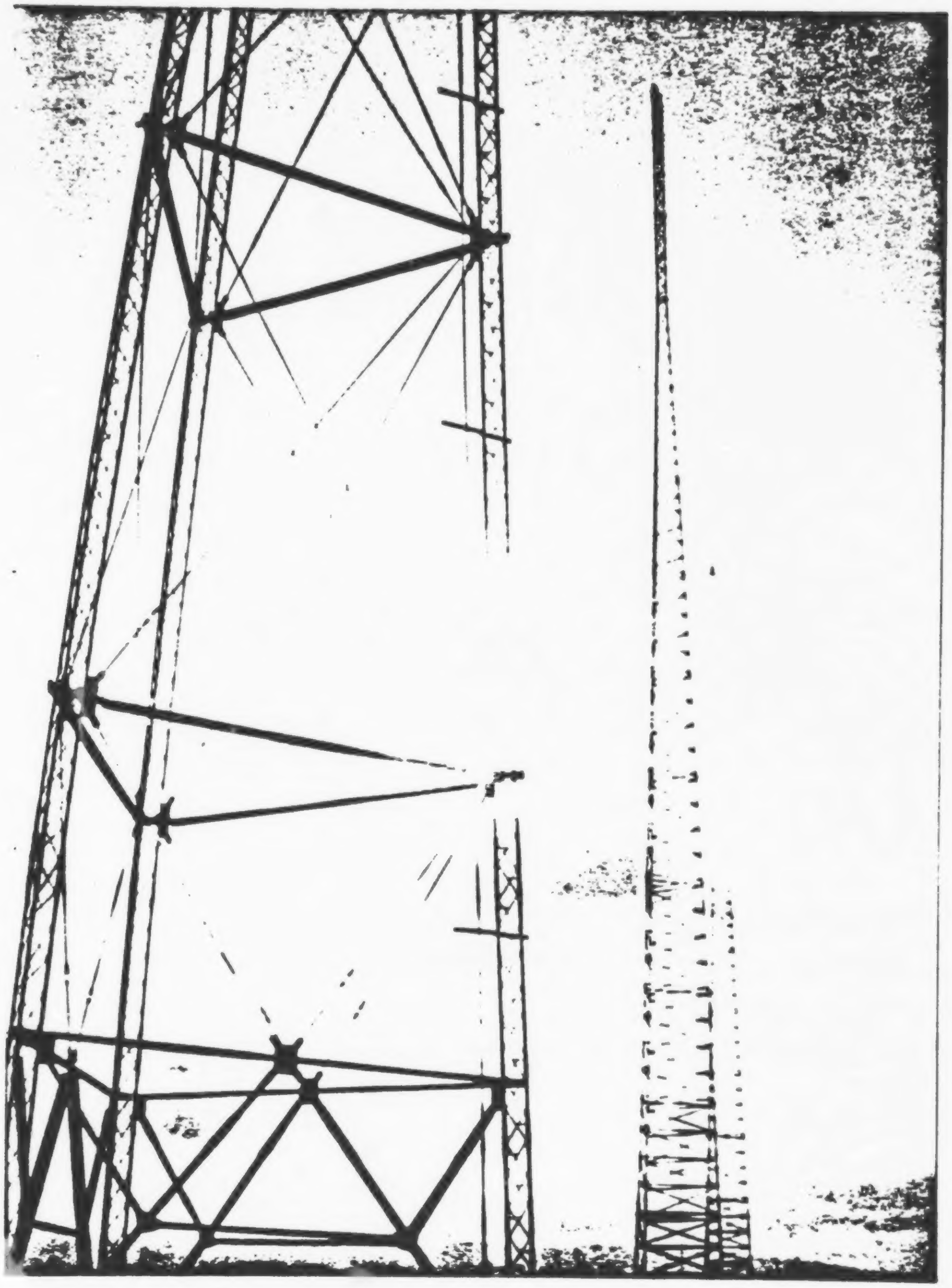


Figure 14. AM radio broadcast antennas are typically located in flat terrain with good ground conductivity characteristics. Each tower is grounded with a system of buried copper wires; the entire tower functions as the broadcast antenna.

Regulatory Impact Analyses are to contain the following information:

1. a description of the potential benefits of the rule...;
2. a description of the potential costs of the rule...;
3. a determination of the net benefits of the rule...;
4. a description of alternative approaches that could substantially achieve the same regulatory goal at a lower cost...[30]

In response, the OMB issued a memo to federal agencies that reiterated the substance of EO 12291 and ampilified portions of it, notably the definitions of alternatives to be considered, costs, benefits, and net benefit.[31]

The EPA drafted an extensive regulatory impact analysis guide, which, together with its four appendices, establishes the EPA's policy response to EO 12291.[32] This guide discusses in detail suggestions for documenting the need for the action; considering of alternative actions; considering benefits, including health and non-health effects; costs to society-at-large (opportunity costs of using resources for a selected purpose at the exclusion of other purposes); and net benefits.

METHODOLOGY

The following is a description of the approach used in this study. The general procedures, data bases, compliance measures and their selection, pre- and post-compliance RF propagation models, social, industry, and individual firm models are outlined. Figure 15 illustrates the relationships among the components of the method of approach.

With reference to Fig. 15, EPA's ORP, as a result of research over the past 12 years, has developed models that estimate the RF in terms of electric field strength and power density of the 10,000 AM and FM radio, VHF-TV and UHF-TV broadcast stations in the U.S. The models use data developed by the EPA from FCC engineering files, research results, and other sources to estimate the current RF environment resulting from the broadcast activities of the stations. To facilitate efficient modeling of the large number of FM radio stations, they were divided into groups with similar antenna design and mounting characteristics. AM radio stations were divided into groups whose antennas expose similar areas to a given intensity of RF. TV broadcast stations were analyzed individually. Stations whose RF is estimated to exceed one of the 18 alternative guidance levels studied are assigned the least costly compliance measure, selected from a series of increasingly complex, costly and effective measures, developed as part of the research for this cost study, that will effect compliance. When a compliance measure is estimated by the model to achieve compliance for a station or group of similar stations, it becomes the basis for the cost input to the three cost models. The cost models produce a variety of cost estimates for three kinds of economic analyses of each of the 18 guidance levels studied using three levels of costs for compliance measures.

ENVIRONMENTAL PROTECTION AGENCY RADIOFREQUENCY RADIATION RESEARCH

Over the past decade, the EPA has been conducting research to define the RF/MW environment to which the public is exposed.[33-39] This has been an extensive research effort that provides the foundation for defining the current RF conditions and identifying potential areas and sources of RF that further research might document as posing a health risk. In the course of these investigations, the EPA has measured the RF field strengths in almost 500 sites in the U.S. in a wide variety of environments and distances from broadcast sources.[40-42] These studies show that 99% of the urban population is exposed to less than 1 $\mu W/cm^2$ of RF (the lowest level considered in the cost study); the median exposure is one-half percent of this small value.

Studies were also conducted of traffic control, ground and airborne radar systems. Traffic radar broadcast systems studied produce less than 1 $\mu W/cm^2$ at distances from the units that people would normally be found. The maximum power density produced is 3.6 mW/cm^2 at 9 cm (3.6 in) from the antenna.[43]

Air traffic control radar systems studied in the San Francisco Bay Area showed a maximum exposure of 1.1×10^{-3} $\mu W/cm^2$,[44] indicating that this source is also below levels being considered for the guideline. In another study, the power density of aircraft-mounted radar systems was measured. Exposures of up to 10 mW/cm^2 at 8 to 18 feet horizontally from the aircraft radar unit were measured[45] (10 mW/cm^2 is the 1966 ANSI C95.1 standard). However, commercial aircraft radar units are generally over 6 feet above the ground (the height of persons on the ground).

Another study was conducted of RF in and on the roofs of tall buildings in proximity to broadcast antennas. Eight buildings were surveyed in five cities across the country. No interior area was found to have an exposure greater than 100 $\mu W/cm^2$; several roof locations,[46] to which the public does not normally have access, were exposed to levels between 100 and 200 $\mu W/cm^2$. One roof location exposure was found to be 230 $\mu W/cm^2$. It was found that mylar film used as a solar reflector is very effective at attenuating RF and could offer a low-cost means to reduce RF in buildings, if this were necessary.

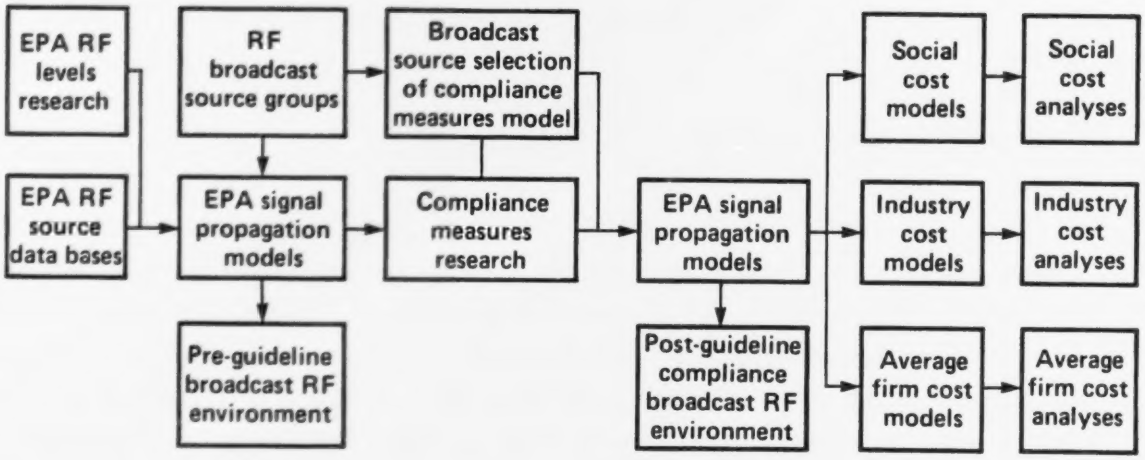

EPA RF levels research
EPA RF source data bases
RF broadcast source groups
EPA signal propagation models
Pre-guideline broadcast RF environment
Broadcast source selection of compliance measures model
Compliance measures research
EPA signal propagation models
Post-guideline compliance broadcast RF environment
Social cost models
Industry cost models
Average firm cost models
Social cost analyses
Industry cost analyses
Average firm cost analyses

Figure 15. The general method of approach combines the output of data bases, physical signal propagation models and the application of compliance measures to social, industry and average firm cost models.

The studies of exposure from radar and inside buildings, together with the extensive studies of general population exposure to RF have lead the EPA to concentrate on commercial broadcasting and, in particular, FM radio as the chief source of public exposure to RF in the environment.

ENVIRONMENTAL PROTECTION AGENCY DATA BASE

The EPA has spent considerable time over the past three years assembling a comprehensive data base on the most critical RF sources from a guidance viewpoint: AM and FM radio and VHF- and UHF-TV stations. This data base identifies each station by call letter, city and state, corporate name, address of studio, geocoordinate location of the transmitter and antenna, and a description of broadcast engineering characteristics such as ERP, antenna type, make and model, number of elements, gain, type of mounting, height above average terrain (HAAT), height of antenna above ground, transmitter power, and others. These data are the basis for the signal propagation modeling performed by the EPA.

RADIOFREQUENCY RADIATION SOURCE GROUPS

There are approximately 4400 FM, 4600 AM, and 1100 TV broadcast stations in the United States. Each station represents a unique physical, topographic, equipment, financial, corporate structure, market, and engineering situation. Antennas are of a variety of configurations and design. They are mounted on a variety of towers, from telephone poles to very tall self-supporting towers. Some towers are located on flat terrain, some on mountain tops, some on building roofs. Most antennas are located alone on a tower; however, some FM and TV antennas are co-located on the same tower. A few FM antennas are designed so that several stations can broadcast simultaneously from a single antenna.

The FCC recognizes three geographic zones with different technical requirements and regulatory rules that accommodate the regional differences in physical and marketing environments.

The FM stations were partitioned into four groups on the basis of gross similarity in antenna mounting, which influences the power density pattern and technical solutions available for complying with standards.

Of the 4400 FM broadcast stations, the EPA data base contained information on about 3900. An adjustment was made in each group on the basis of the existing distribution to reflect the actual number of stations. These were partitioned according to the following antenna mounting methods.

1. FM stations with antennas mounted alone on a tower (guyed or self-supporting) whose base is on the ground (SFMT).
2. FM stations with antennas co-mounted with one or more other antennas on a tower (guyed or self-supporting) whose base is on the ground (MFMT).
3. FM stations with antennas mounted alone on a mast or tower whose base is on a building (SFMB).
4. FM stations with antennas co-mounted with one or more other antennas on a mast or tower whose base is on a building (MFMB).

The SFMTs and MFMTs were analyzed without modification. However, except for survey costs, the SFMBs and MFMBs were not included in the cost estimate for several reasons. Antennas mounted on masts or towers on building roofs are generally in areas of relatively high population density. However, the two major paths of public exposure to high field strengths are very rare occurrences. The first path is the exposure of people on the roof. Except in rare instances, the World Trade Center in New York, for instance, the public does not have access to building tops on which antennas are mounted. The other major public exposure path involving roof-mounted antennas is the exposure of people in nearby buildings, particularly in situations in which the RF waves are transmitted horizontally from an elevation identical to people in an adjacent building. Buildings attenuate RF significantly and levels measured inside structures adjacent to FM broadcast antennas are relatively low, typically below 50 $\mu W/cm^2$ and are not known to exceed 100 $\mu W/cm^2$.[46]

Where there is an antenna on a roof top adjacent to a new building that is taller than the antenna mast, exposure of occupants in the new building to the main signal beam is possible. However, the presence of the new building significantly degrades the signal coverage of the station's listener market. This is particularly true of FM because the physical characteristics of FM waves cause them to reflect easily off obstructions. Therefore, FM stations whose broadcast signals have been blocked by new construction are strongly motivated to relocate their antennas, often to the roof of the new building. If this location is not available, stations attempt to lease space on an existing tower or build a new tower elsewhere. Recently, towers that have been shadowed by new buildings have been moved to different locations in Houston where antennas were relocated from One Shell Plaza to a tower. Antennas were moved from the Biscayne Bay Building in Miami to a TV tower when a taller structure shadowed them. Therefore it is assumed for this analysis that FM antennas mounted on masts or towers on rooftops will not require modification to comply with RF guidelines.

The EPA data base is complete with respect to all AM broadcast stations. There is a basic similarity in the configuration of AM antenna systems, rendering only one compliance measure appropriate. The AM stations were segmented according to the distance from the tower that is exposed to RF exceeding the specified field strength level.

Television stations were analyzed individually because the prominent differences among stations, such as the broadcast frequency band (VHF or UHF), ERP, and whether the antenna is single- or co-mounted with other TV antennas on the same tower, all influence the choice of technical measures for compliance with a guideline. Furthermore, the fewer number of TV stations made individual analysis relatively easy to do.

ENVIRONMENTAL PROTECTION AGENCY BROADCAST SIGNAL PROPAGATION MODELS

Over the past 5 years, the EPA has been developing and refining models of AM, FM, VHF-TV and UHF-TV antenna wave propagation[4,7] from monopole and dipole configurations of various sizes. These models calculate the horizontal and vertical polarized components of the signal and grating lobe and compute exposure in V/m and $\mu W/cm^2$ at any height above ground and distance from the antenna.

The data in the EPA data base were used, together with antenna performance characteristics, as input to model the strength of signals broadcast from every radio and television station in the data base. The models have been calibrated by independent field measurements at a variety of broadcast sources. The models identify stations that will probably exceed various specified field strengths or power density levels. They also estimate the distance from the tower that the values are exceeded.

RADIOFREQUENCY RADIATION GUIDELINES

Because the final values at which the guidance will be set were not known at the time of this study, all cost analyses were performed for 18 different possible guidance levels. This approach has the advantage of revealing the variations in cost as a function of guidance level over a wide range of possible standard levels.

The AM radio RF guidance is presented in V/m, ranging from 10 V/m to 1,000 V/m; the FM radio, VHF-TV and UHF-TV broadcast RF guidance is presented in $\mu W/cm^2$, ranging from 1 $\mu W/cm^2$ to 10,000 $\mu W/cm^2$. A frequency-dependent standard reflects the approach used in existing radiofrequency standards in the United States and other countries. Figure 16 shows a shape and limiting values for a typical guidance level. Note that the curve is flat from 30 MHz to 1 GHz. Many existing standards begin an upward ramp at about 300 MHz similar to that shown in Fig. 17. EPA's proposed guidance may also incorporate a ramp, but the exact shape was not established at the time of this study. The shape which was chosen for this study represents the most conservative approach which might be chosen by EPA. If a portion of the flat region which extends from 30 MHz to 1 GHz were changed to a ramp shape, the resulting impact of the guidance on UHF stations would be reduced from the values predicted in this analysis. The limiting values of the 18 guidance levels for AM, FM, and TV frequencies are shown in Table 4.

As mentioned earlier, the EPA is now considering three alternative guidance levels structured differently from those used as the basis of the total cost estimates. However, the results of the cost study can be used regardless of the shape of the guidance proposed. The total cost of the guidance can be found by combining the cost of the guidance level applicable for FM, VHF-TV and UHF-TV stations with the cost of the guidance level applicable for AM stations. The range of guidance levels examined in this report should permit combinations to cover whatever shape guidance is finally proposed.

The standard is assumed to apply anywhere on the ground to which the public would normally have access. The public has access to broadcast studios, which are often located very near the transmitting tower.

COMPLIANCE MEASURES RESEARCH

An extensive effort was made to identify technical means for RF sources to comply with various guidance standard levels. The advice of consultants, the broadcast industry, and equipment manufacturers was sought in an attempt to identify all practical solutions. New concepts for compliance measures were identified and subjected to mathematical modeling to test their efficacy. Some of these ideas have proved effective and some have not. A discussion of all of the compliance measures and the group that was selected as practical is given later in this report.

MODEL OF STATION SELECTION OF COMPLIANCE MEASURES

An estimate of the costs of a guidance requires some idea of the choice of compliance measures broadcast sources will make in response to an RF standard. Stations differ in the markets they operate in, their financial condition, the technical aspects of

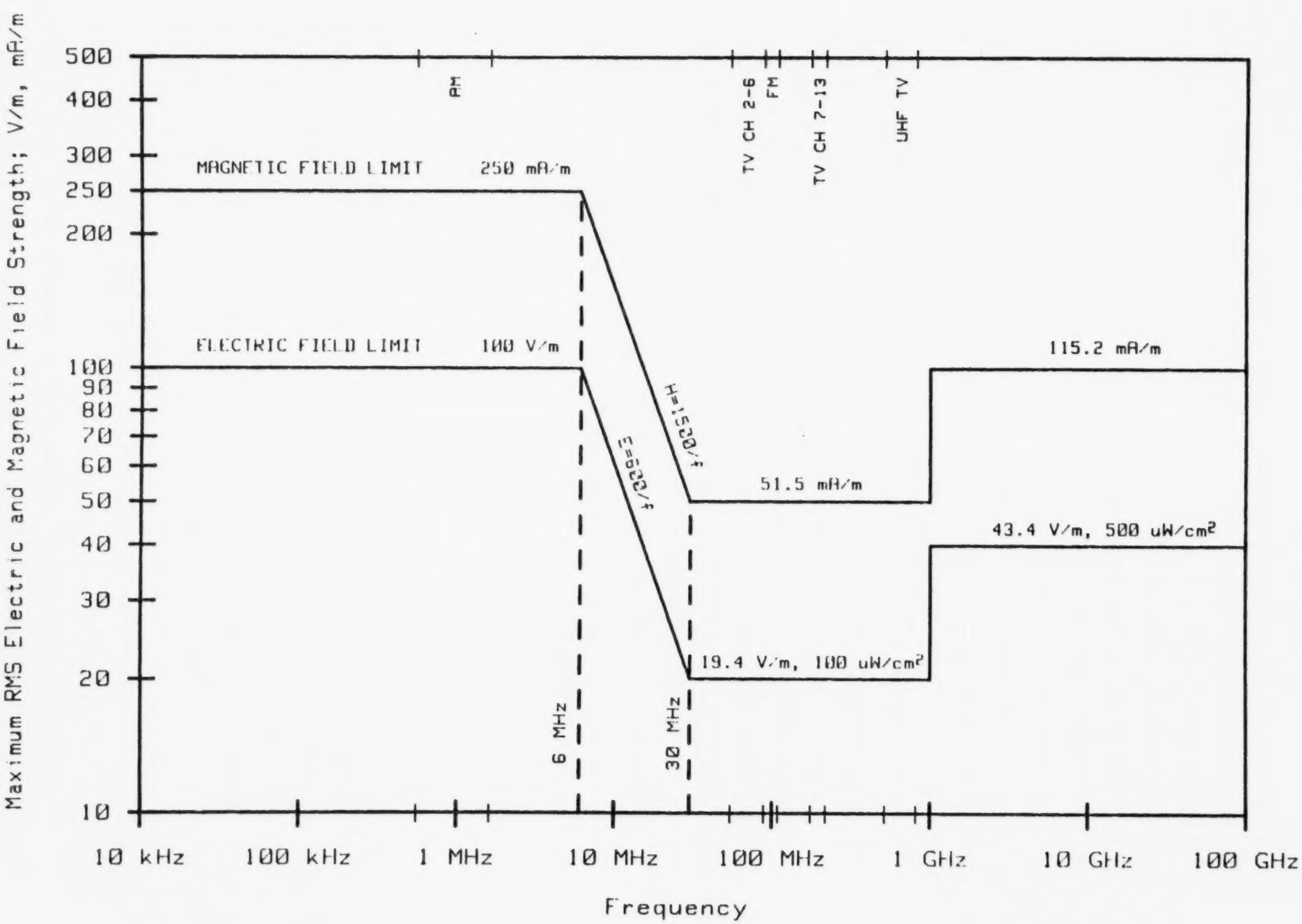


Figure 16. Limiting values of magnetic and electric field strength for a typical guidance for AM, FM, VHF-TV and UHF-TV.

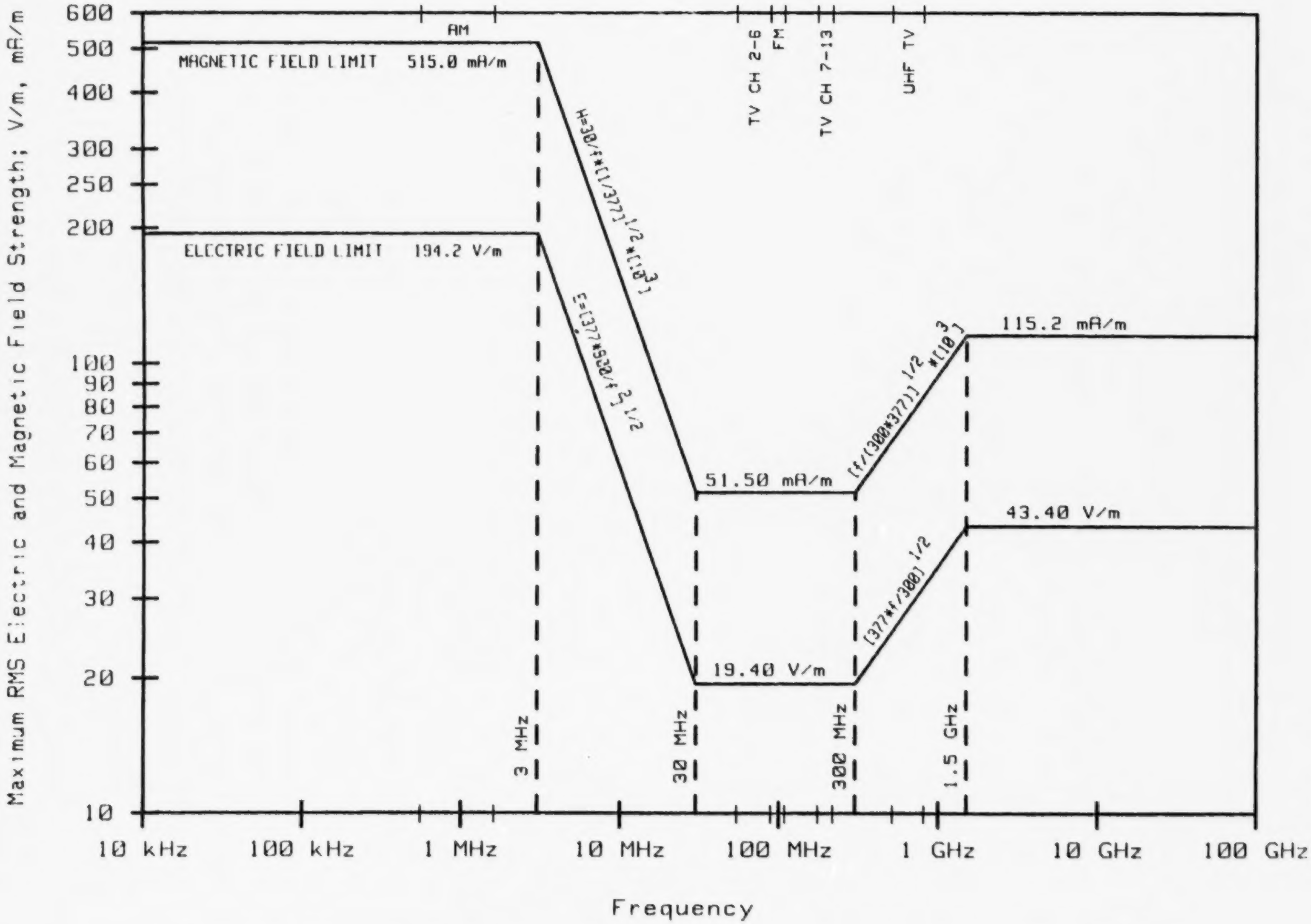


Figure 17. Limiting values of magnetic and electric field strength for another typical guidance for AM, FM, VHF-TV and UHF-TV.

Table 4. Limiting values of the 18 guidance levels for AM, FM, and TV frequencies.[48]

Guidance level	Limiting field strength at AM frequencies V/m	Limiting power densities at FM and TV frequencies µW/cm²
1	10.0	1
2	31.6	10
3	44.7	20
4	70.8	50
5	86.6	75
6	100.0	100
7	141.3	200
8	173.2	300
9	200.0	400
10	223.9	500
11	244.9	600
12	264.6	700
13	281.8	800
14	300.0	900
15	316.2	1,000
16	446.7	2,000
17	708.0	5,000
18	1,000.0	10,000

their broadcast systems and out-of-compliance situation, equipment changes contemplated for other reasons that would minimize the real cost of compliance[a] and the quality and cost of equipment they can afford. Broadcast equipment varies greatly in cost, and since all but one of the compliance measures involve installation of new equipment, cost will be a primary selection criterion.

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[a] A survey of selected FM radio broadcast stations to determine typical equipment rollover schedules was conducted of a large sample of the FM radio stations.[4] The results were not available in time to be taken into consideration in the cost study, but generally, approximately 20% of stations anticipate replacing their antennas within three years, another 10%, within ten years and the remaining 30% do not expect to replace antennas.

Ultimately, each station is assumed to require an engineering study to determine its compliance with the RF guidance, should it be implemented.[a] There are a variety of technical solutions and the choice of the most suited for a particular station will be a function of the factors mentioned above. It was not possible to design a detailed engineering solution for each station that might exceed a particular standard; therefore, the cost models were built on assumptions of compliance measure choice based on the collective professional judgment of the researchers, EPA, broadcasters, and engineering consultants. Generally it is assumed that stations will select the least expensive solution that will achieve compliance.

ENVIRONMENTAL PROTECTION AGENCY COMPLIANCE MEASURES EFFECT MODELS

Individual stations or groups of stations whose RF is estimated to exceed one of the 18 alternative guidance levels studied are assigned the least costly compliance measure, selected in the EPA compliance model from the final list of increasingly complex, effective and costly measures that will effect compliance. Every station was estimated to achieve compliance at every standard level studied using one of the compliance measures. The output of this modeling provides the engineering basis for estimating the costs of compliance.

SOCIETY-AT-LARGE COST ESTIMATION MODELS

The input to the cost models is generated by the compliance measures effects propagation models and cost data developed as part of the compliance measures research. Normally, in a cost benefit analysis, extensive discussion is given to the choice of discount rate used to calculate the present value of a stream of future costs or benefits. It is assumed for the social cost analysis, however, that the costs for compliance with an RF guidance would occur during the year in which compliance is mandated for a station. This assumption is used because the purchase and installation of equipment necessitated by the guidance can easily be accomplished in one year, and, although firms may elect to finance the purchase of the equipment, the terms of payment and cost of borrowing are not considered in social cost accounting. Thus, there is no stream of costs. A minor exception is a portion of the cost for one FM radio compliance measure that represents the annual expense of leasing space on another broadcaster's tower. This is a continuing cost that only amounts to one to two percent of the social cost; even though the discount rate used for this fractional component, therefore, has virtually no impact on the aggregate cost, the OMB-suggested rate of 10% was used. It is assumed that stations will comply with the guidance in five equal groups or cohorts over a five year period, one cohort complying in each of five successive years. Because it is assumed that each station faces a once-only cost, the "cash flow" social cost of compliance associated with each cohort complying in a particular year is a one-year undiscounted expenditure. But to calculate the present value to society of the cost of the guidance for all five cohorts with associated expenditures over a five-year period requires discounting the second through the fifth cohort expenditures back to equivalence with the first. Costs to society estimated by the model are presented in terms of gross total compliance cost, including the cost of a survey for all stations and the cost of compliance measures for stations requiring mitigation, annual "cash flow" (undiscounted) cost and total present (discounted) value. The analyses were performed for 18 alternative guidance levels at three cost levels.

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[a] This may not be necessary for all stations. The EPA is developing criteria that will permit stations to conduct preliminary evaluations of the need for a more detailed survey. The conservative assumption used in this analysis somewhat overstates the cost of compliance, particularly at the higher, less stringent, guidance levels.

INDUSTRY COST ESTIMATION MODELS

Inputs to the industry cost models include compliance measures effects model results, compliance cost data, and income tax variables. The cost to industry analysis differs from the social cost analysis in several ways. The industry cost analysis considers the net-of-taxes cash flow cost of compliance with the guidance. Interest, the cost of financing capital equipment purchases, is included as an expense. But interest, depreciation, expenses, and the investment tax credit reduce tax liability. The cost of compliance is thus shared between industry and the government in the form of tax credits and deductions from taxable income. It is assumed for the industry cost analysis that stations comply in five equal annual cohorts just as in the social cost analysis. However, it is also assumed for the industry analysis that stations incur expenses in the first year and over the subsequent five years of capital amortization. Therefore, the entire industry cost stream is spread over 10 years as each succeeding cohort initiates compliance, followed by five years' amoritization (refer to Appendix Tables D-2, E-2, or F-2 in Volume 2). The industry present value of the cost of compliance is calculated by discounting the entire 10 year cost stream. Costs to industry estimated by the model are presented in terms of projected actual and average annual cash flow costs and present value. The output values are given for 18 guidance levels at three cost levels.

AVERAGE FIRM COST ESTIMATION MODELS

Input to the models of the three broadcast industry segments include compliance measures effects models results, compliance cost data, income tax variables, and income data on the broadcast industry. A more detailed examination of private sector effects of the guidance was made by analyzing the costs in terms of the average AM, FM and TV broadcast station. Models were developed that project pro forma income statements for the average profitable and the average unprofitable FM, AM and TV broadcast stations. It is assumed for the average firm analysis that the individual station faces first-year costs and capital amortization expenses over the next five years. The present value cost for the average firm is calculated by discounting the first year and five subsequent years. The present value cost for the average firm in each of the five cohorts is calculated separately; an average present value cost is derived by calculating the mean of the present value for a firm in each of the five cohorts. Estimates are made of gross and net-after-tax projected and average annual cash flow cost and the effect on taxable income and present value of the net cost of compliance. An analysis is also presented of the maximum and average annual percent reduction in profit (or increase in loss) of the net-after-tax cost of compliance for the average FM, AM and TV broadcast firm. These analyses are presented for 18 guidance levels at three cost-levels as an illustration of the potential effect of a guideline on an individual firm.

SUMMATION COST MODELS

Results of the previous model analyses are used to estimate aggregate social and industry costs of the guidance, the effect of compliance on the average broadcast station, and the total number of broadcast stations requiring a compliance measure at any given guidance level. The summation analyses are given for 18 guidance levels at three costs levels.

MEASURES TO COMPLY WITH RADIOFREQUENCY RADIATION GUIDELINES

During the course of this study much thought has been given to identifying ways in which broadcasters could comply with an RF guideline, if it becomes necessary. Several meetings were held with a number of consultants, equipment manufacturers, and station engineers to identify as many solutions as possible. Two computer design studies were funded as part of this study, the purposes of which were to analyze the efficacy of a variety of bay spacings and groupings in reducing downward radiation.

This research indicates that practical and effective measures to mitigate unwanted levels of RF to comply with a guidance are limited to variations of three actions: (1) exclude or warn the public of areas exposed to RF over the standard, (2) use existing antenna models or design new ones that produce less unwanted downward grating, or side-lobe, radiation, or (3) raise the antenna to reduce the RF energy at ground level. All three compliance measure approaches are applicable to FM radio; only exclusion of the public is appropriate for AM radio; a combination of antenna design and increasing the height of the antenna can be used for television broadcast systems.

The following discussion describes the major ideas considered for potential compliance measures in terms of technical merit and practical acceptance.

REDUCE EFFECTIVE RADIATED POWER

Power density is proportional to the square of field strength; a station could, technically, reduce its broadcast power and power density. Although few listeners in the major reception area of a station would notice even a 50% reduction in ERP, outlying listeners might. Furthermore, success in broadcasting is commonly thought to consist of five elements: market, signal coverage, programming, advertising rates, and promotion. Therefore, station managers and sales/marketing people would perceive such a reduction as a significant loss from a sales viewpoint.

Even if a given station could cover the area of license with grade A reception with lower ERP, its signal cannot be weaker than competing stations without affecting comparative reception and, thus, listener reaction, ratings, and advertising rates. A change in ERP, especially a significant one, can directly affect coverage, and indirectly, market and advertising rates. The other mitigation measures merely affect operating or capital budgets for a short period, but a reduction in ERP may affect revenues. Therefore, broadcasters will do anything to avoid reducing ERP.

Furthermore, the FCC requires stations to maintain a specified signal strength over the broadcast coverage area and to maintain the licensed transmission power output to within -10% to +5%, so a significant reduction in ERP is not feasible.

PROHIBIT PUBLIC ACCESS TO AREAS EXPOSED TO FIELD STRENGTHS EXCEEDING THE STANDARD

This approach assumes a station will conduct an instrument survey of the field strength transmitted by its antenna and then erect a barrier to exclude the public from access to areas exposed to power densities above the standard. The FCC could accept this solution as an absolute deterrent to public exposure to RF above the standard.

The configuration of AM transmitter-antenna systems differs from FM and TV systems, whose antennas are electrically insulated from the towers they are hung on. Transmission of energy occurs only through the physical antenna bays; the tower is merely a means of raising the antenna above surrounding obstructions. However, the entire tower is used to generate the signal in AM systems. AM tower-antenna systems are grounded with an extensive series of radial copper lines buried about 6 inches beneath the surface. Refer to Fig. 13 for an illustration of a generalized AM antenna system. AM stations own or lease an area large enough for the ground-wire system. Many of these antenna systems, which are usually located in undeveloped rural or industrial areas of low pedestrian traffic, are completely fenced, often for other reasons, for example to control cattle grazing. For this analysis, it is assumed that AM stations lease or own land sufficient to exclude the public from the area exposed to RF over the standard level at each guidance level.[4] This compliance measure is the only one appropriate for AM radio broadcast stations.

On the basis of the collective judgment of professional consulting engineers and station personnel, assumptions were made about the number of AM stations whose towers are already adequately protected from public access by fencing. Refer to Table 5 for the percentage of stations assumed to be fenced and therefore need no additional fencing.

POST WARNING SIGNS IN AREAS EXPOSED TO EXCESS RF

The cost analysis was performed on the basis of positive compliance measures that assure that the public will not be exposed to RF radiation above the guidance. However, because many FM antennas are located in remote areas and are inaccessible to all but an

Table 5. Percent of AM broadcast antennas assumed to be adequately fenced to meet RF guideline.

Cost level	Percent of stations
High	15%
Medium	33%
Low	50%

occasional passerby, a separate study was performed of the effect on the cost of compliance of permitting such stations to post signs warning of the over-guidance RF radiation.

A study of population proximal to a sample of SFMT FM antennas shows that a significant portion are very remote from population concentrations. Using 1980 census data and a commercially prepared geographical data base matching 1980 census tract, and census enumeration districts (CED), which are geographical units of varying size corresponding to about 400 population, the geographic location of a sample of FM antennas was compared with the location of these geographical units. Table 6 summarizes the distance of the antenna samples from CEDs. The area surrounding the antenna in which no CEDs (no apparent population) are found is calculated from the radial distance from the antenna to the nearest CED.

It was arbitrarily assumed for the special analysis of the posting alternative that the three most restrictive distance categories would serve as an estimate of the percentage of FM stations that might be allowed to post warning signs as a means of compliance with the RF guidance. Thus, for the low-cost special posting analysis it was assumed that, of the FM stations, 22% could use this solution, the medium-cost analysis, 14%, and the high-cost analysis, 9%. However, because there is considerable uncertainty at this stage about the details of implementation, the primary cost analysis assumes posting warning signs will not be permitted; only the special analysis of the posting alternative assumes this inexpensive solution will be permitted and only the difference between the two analyses is reported.

Table 6. Proximity of a sample of single FM antennas mounted on ground-based towers to Census Enumeration Districts (CED).

	Percent of stations whose antennas are no closer than 6 given distances from a CED					
distance (km)	.5	1.0	2.0	3.0	4.0	5.0
distance (mi)	.31	.62	1.24	1.86	2.49	3.1
area (πmi^2)	.30	1.21	4.83	10.87	19.48	30.19
Percent of stations	81.0	60.0	37.0	22.0	14.0	9.0

INSTALL SHIELD ON BUILDING-BASED ANTENNA TOWERS

FM antennas mounted on masts or towers located on building roofs to which the public has access can expose the rooftop to relatively high field strengths. One solution is to place a shield on the tower just under the antenna that would reflect the signal away from the rooftop. However, successful design of this solution requires extensive engineering studies that will vary with the situation. It is assumed that the number of antennas on roofs to which the public has access is so small that they can be ignored in the analysis.[7] AM and TV antenna systems are not mounted on buildings.

INSTALL REFLECTIVE MATERIALS ON ADJACENT BUILDING WINDOWS

Where an FM antenna on a building-based tower beams the signal horizontally to nearby buildings, the signal can be very effectively reduced by installing reflective mylar material designed to reflect light and heat. This solution is not included in the cost analysis because it is assumed that building-based antennas, in general, do not expose the public to excessive field strengths.

CHANGE THE POWER TO GAIN RELATIONSHIP

The ERP of a station is a function of the power transmitted and the signal amplification (gain) of the antenna. FM and TV antennas, which are similar in design, have more gain (greater multiplication of the signal) with more bays and less gain with fewer bays. Low-gain antennas (fewer bays) tend to produce a large, bulbous main radiation lobe pattern that places a higher intensity of RF in the vicinity immediately beneath the antenna than does a high-gain antenna, which produces a more horizontal beam that does not irradiate the immediate vicinity with as intense an energy level. (All of the energy levels discussed here are low by current safety standards; the point being emphasized here is the relative difference between low- and high-gain FM and TV antennas.) One way to reduce near-field power density might be to redesign the antenna to cast more energy farther from the tower where its intensity would be reduced (power density is proportional to the inverse of the square of the distance; therefore, a beam of RF energy that intercepts the ground at a distance from the antenna will result in weaker power density than a similar beam intercepting the ground close to the antenna).

However, low-gain antennas are increasingly used, especially by FM stations because: 1) they are effective in filling poor-reception areas in valleys below the antenna, 2) they reduce multi-path problems, 3) they improve mobile (auto) receiver reception, a growing segment of the market, and 4) they can result in reduced phase distortion in the transmitted signal. Because this concept would probably meet with a fair amount of industry resistance, it was not pursued.

REPLACE EXISTING ANTENNA WITH A MORE EFFICIENT MODEL

Some FM and TV antennas have a more efficient radiating pattern than others. That is, they concentrate more of the total energy in the main beam or lobe and less in side, or grating lobes. Less efficient antennas have larger "losses" from the main beam into grating lobes, which are often responsible for significant RF on the ground in the vicinity of the antenna. If the existing antenna is of an inefficient type, it can be replaced with a more efficient model, significantly reducing the downward radiation.

This solution may not be appropriate in situations where a station has purposely designed an antenna to broadcast a large lobe to fill poor-reception areas in hilly terrain or in other special-application situations. However, in general, this solution is quite workable and has been used as a compliance measure for both FM and TV antennas.

OPTIMIZE INTER-BAY SPACING OF THE ANTENNA ELEMENTS FOR MINIMAL DOWNWARD RADIATION

FM and TV antennas are normally designed with the bays spaced one wavelength apart for signal phasing and gain purposes. However, if the bays are physically spaced between one wavelength and one-half wavelength apart and the phasing and feed system is modified, adjacent bays tend to cancel out downward radiation while still producing main-beam gain. There is some loss of gain in a less-than-full-wavelength-spaced system compared to a full-wavelength-spaced system, but this can be overcome by adding a few more bays.

The optimal inter-bay spacing would probably fall between one-half wavelength and one wavelength. The optimal spacing for each antenna installation depends on a number of factors such as the desired radiation pattern, antenna and tower configuration, transmitter power-antenna gain relationship, and others. In general, the smaller the inter-bay spacing, the greater the number of supplemental bays required to maintain the original gain. Accurate engineering costing would require detailed knowledge of the new antenna spacing, available only with a complete engineering study. However, determining the radiation performance characteristics of FM and TV antennas, though complicated, can be done by two basic methods: measurement and calculation.

Measurement

A full-size test antenna can be placed on an outdoor antenna pattern range and its transmission characteristics measured. The quality of the range is the key to good results. A good antenna pattern range approximates free space, i.e., it produces patterns as if the test antenna were isolated from all of its surroundings (no appreciable reflections from nearby structures or the earth under the antenna). Such ranges are expensive to establish and generally do not exist.

Scale model measurements of an antenna also can provide radiation characteristics but generally require expensive indoor antenna ranges (anechoic chambers).

Calculation

In order to calculate antenna radiation patterns, one must know the amount of current flowing on all metal parts of the antenna and its supporting and nearby structures. For simple antennas (such as dipoles and loops), a method is employed whereby the current shape is assumed. This method is seldom applicable to commercial FM antennas because they are more complicated than dipoles and loops, primarily because they contain support brackets and vertical feed line sections for which these simple assumptions are inadequate.

One of the project consultants used a computer code developed by two researchers at LLNL called Numerical Electromagnetic Code (NEC),[49] which uses the Method of Moments to calculate the currents on an antenna, regardless of the structure's complexity. This technique can be used by an experienced antenna engineer who is thoroughly knowledgeable in the theoretical limitations of the method to construct an accurate numerical model of the antenna. The results of this kind of analysis have been validated for a wide range of antenna types, which encompass FM structures, during the past 10 years.

The assumption was made in this study that all new antennas with bays optimized for minimal downward radiation would use half-wavelength spacing. This assumption somewhat overstates the cost to industry for this compliance measure but introduces some conservatism in the overall results.

Figure 18, plotted by NEC, shows a typical relationship between FM antenna gain and number of elements for bays spaced one wavelength and one-half wavelength apart.

Of the antenna solutions, this is the most expensive because the old antenna must be replaced and a new one assembled and tested at the manufacturing plant. A greater number of elements is required. Further, the tower often must be analyzed for its structural ability to handle the extra load the greater number of elements would entail. Still, the solution is technically feasible and not prohibitively expensive in many cases. It has been used as a compliance measure for FM and TV antennas in this study. When this compliance measure is assumed to be employed, it is always with a new antenna of a more efficient radiating pattern.

CREATE GROUPS OF ELEMENTS

Two computer modeling studies have been conducted to investigate the effectiveness of this concept in reducing downward radiation for FM and TV antennas.[50] Bays were divided into groups with intra-group spacing maintained at one wavelength and

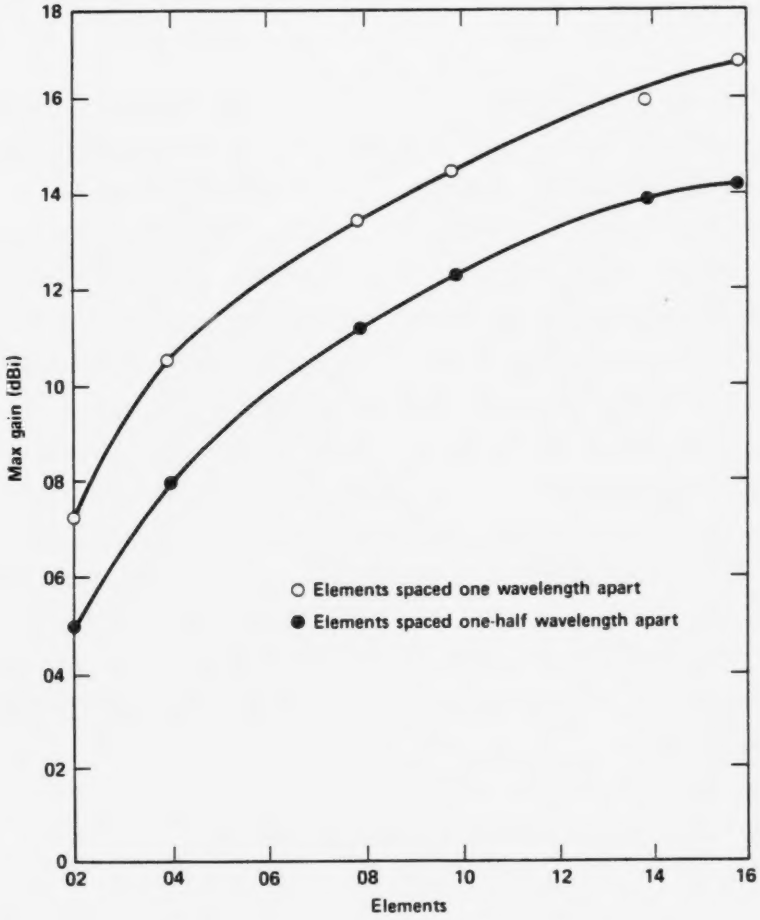

Figure 18. Typical FM antenna gain related to number of elements: a comparison of half-wavelength with full-wavelength spacing.

inter-group spacing either half a wavelength or one-and-one half wavelengths. The studies show that the experimental antenna configurations do not significantly reduce near-field power density. Furthermore, antenna systems with such configurations would have to undergo extensive development and testing by manufacturers. The resulting antenna systems would be more costly than existing ones. Because this measure is apparently minimally effective in reducing near-field power density and will be relatively expensive, it would be impractical, and as a result it was not used in the cost analysis.

RAISE THE ANTENNA

The power density is inversely related to the square of the distance between the source and subject, so raising the antenna to increase its distance from the ground is effective in reducing power density from FM and TV antennas.

However, FM and TV broadcast antennas cannot be mounted on towers built to any arbitrary height a station owner desires. Antennas must conform to a number of FCC regulations, among them a relationship between HAAT and ERP. The relationship differs, depending on the power class of the station, but in general, the taller the antenna in terms of HAAT, the lower the ERP must be to regulate inter-station signal interference. Furthermore, towers generally must conform to FAA regulations, which govern air space obstructions. In addition, there may be height restrictions imposed by local city, county, and township planning bodies. However, in most instances, replacement towers and antennas could be designed to meet FCC, FAA, and local permit requirements. Therefore, it is assumed that towers of the required height will be permitted. Where this is not the case, it is almost certain that some other technical solution can be designed to achieve compliance with the standard, probably at a cost no greater than the estimated cost of a new tower.

Towers are of two types, guyed or self-supporting. In either case, they are built to a given height with a calculated load-bearing capacity. It is not usually possible later to add sections to the top of the tower to raise it because the structure has not been designed to hold the added weight and because the guying has been designed with a given horizontal and vertical geometry that cannot easily be changed. Therefore it is necessary, in virtually every case, to build a new tower to raise an antenna, if lease space cannot be found on an existing taller tower.

Where an antenna can be moved to an existing tower, often a self-supporting TV tower is chosen, because they are so large that the relatively minor added load of an FM

Antenna is usually able to be accommodated. However, very often a detailed structural analysis is necessary to certify the tower's ability to handle the additional load. Often the tower must be structurally reinforced.

The general solution involving raising the antenna has been incorporated into three applications for FM antennas, leasing space on an existing tower, building a taller tower on the existing site, and building a new tower on a new site. TV antennas are assumed to be raised on new towers on the existing tower site. This solution is not appropriate for AM antenna systems, which incorporate the entire tower (usually 1/4 wavelength tall) and an extensive electrical ground system in the antenna system.

SUMMARY OF COMPLIANCE MEASURES FOR FM, AM, AND TV BROADCAST STATIONS

Table 7 shows a summary of the compliance measures used in the analysis of FM, AM, and TV stations. The compliance measures for FM are applied as shown in Table 4, in order of increasing cost. This results, generally, in a minimum cost solution, although there may be occasional non-minimum cost compliance measure selection because, for example, some shorter guyed towers (measures 5,6) are less expensive than some complex one-half wavelength antennas (measure 3). Each TV station was examined individually for the minimum cost compliance measure. For TV antennas, compliance measures 2 and 3 are assumed to be combined to result in an antenna design of reduced downward radiation. Compliance measure 5 is applied to TV with either the existing antenna or a new antenna, depending on cost.

Because FM radio stations are the chief source of public exposure to RF radiation, most of the effort in this study was focused on mitigation measures and costs pertaining to the FM broadcast industry. A number of the compliance measures appropriate for FM antennas may also be appropriate for TV antennas; these include posting warning signs (not used with FM stations except in the special cost study) and building a new tower on a new site. Mitigation for TV antennas includes one tower option, build a taller tower on the existing site. Generally, TV antennas must be placed on the top of a tower; frequently, a TV station or group of stations will build a tower, occupy the top and lease antenna space lower down to FM stations. We assumed that most of the available favorable locations for TV antennas are already occupied because the capital costs and revenue requirements for TV stations required a good antenna location originally to facilitate market coverage. We therefore assumed that the existing tower would be replaced by a taller one in situations where compliance was estimated to be achieved only by raising the TV antenna.

Table 7. Compliance measures assumed available for FM, AM, and TV broadcast stations.

Compliance	FM	AM	TV
1. Post area over-guidance	not allowed[a]	not allowed	not allowed
2. Replace existing antenna with more efficient model with standard 1-wavelength	OK	not applicable	OK for both VHF-TV and UHF-TV antennas
3. Replace existing antenna with more efficient model with bays spaced 1/2-wavelength apart	OK	not applicable	OK only for VHF-TV antennas
4. Lease on taller existing tower	OK	not applicable	not applicable
5. Build new tower on existing site	OK	not applicable	OK
6. Build new tower on new site	OK	not applicable	not applicable
7. Prohibit public access to area over-guidance	not applicable	OK	not applicable

[a] Costs reported assume FM stations will not be allowed to use this inexpensive compliance measure, which does not positively reduce RF levels but warns passersby of excess RF levels. A separate analysis was conducted of the effect on the overall cost of permitting FM stations whose antennas met strictly defined criteria of "remoteness" from population. The savings amounts to as much as 20% for the FM industry and as much as 8% for the entire broadcast industry at guidance level 1. The saving in using posting warning signs declines dramatically at higher guidance levels.

It is also possible that both FM and TV broadcast stations could comply by prohibiting public access to the area exposed to RF radiation that exceeds the guideline. This is the one measure applied to AM stations because there are few alternatives and AM stations generally control access to sufficient land to fence the over-standard area. The owership or leasehold and surrounding land use situation is much less clear for FM and TV stations. The additional factors of possible land purchase or lease costs involved in the fence solution were too varied to include this option for FM and TV antennas.

FM antennas that are raised on taller towers using compliance measures 4,5, or 6 are arbitrarily distributed among those three measures as shown in Table 8. One-third of the stations with antennas co-mounted with one or more other antennas on towers whose antennas are raised using compliance measure 5 or 6 are assumed to relocate with at least one other station, reducing the cost of these measures for the MFMT by one-sixth (1/3 of the MFMT stations x 1/2 the cost).

Many AM radio stations antennas are already protected by fencing for insurance purposes or because they are located in pasture land or as a protection against vandalism. The number of AM stations assumed to have adequately fenced antennas, and thus not requiring a compliance measure, is shown in Table 5. It was assumed that the base of all AM towers are fenced to a distance of 6 ft from the tower and, therefore, any tower estimated to be emitting RF radiation in excess of a given guidance level out to a distance of 6 ft was assumed to be in compliance.

Table 8. Distribution of compliance measures 4, 5, and 6 among single and multiple FM stations requiring antennas mounted on taller towers (percent).

	Fix 4 Lease on another existing tower	Fix 5 Build taller tower on existing site	Fix 6 Build taller tower on new site	Total of three fixes
Low-cost analysis	12.5	75.0	12.5	100%
Medium-cost analysis	25.0	50.0	25.0	100%
High-cost analysis	37.5	25.0	37.5	100%

COMPLIANCE MEASURE COSTS

All stations are assumed for purposes of the cost analysis to require a survey of the electromagnetic environment to determine the need for compliance measures.[a] The survey, probably by a professional consulting engineering or station staff engineer, will be used with a thorough analysis of the station's existing equipment to make decisions about the compliance measure to use. Stations differ so much in equipment configuration, location, market, competition, power requirements, land owned, local soils and meteorological conditions (which influence tower costs), tower accessibility and financial condition that it is not possible to apply a generalized engineering solution to a calculated, rather than a field-measured, problem and accurately cost it. The range of costs from low to high in the following discussion reflects these uncertainities.

The compliance measures applicable to FM stations are detailed in Table 9. The cost of posting warning signs for antennas in remote areas is shown, although this inexpensive measure is not included in the costs reported (see note b, Table 9).

The only positive compliance measure available to AM stations that may be over-standard is fencing to exclude the public from exposure. The cost of fencing is shown with an electromagnetic survey in Table 10.

The compliance measures available to TV stations include replacing the existing antenna with a type that produces reduced downward energy, raising the existing antenna on a taller tower, or building a new tower on a new site with a new antenna. The cost components are shown in Table 11.

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[a] This may not be necessary for all stations. The EPA is developing criteria that will permit stations to conduct preliminary evaluation of the need for a more detailed survey. The conservative assumption used in this analysis somewhat overstates the cost of compliance, particularly at the higher, less stringent, guidance levels.

Table 9. Costs[a] of compliance measures for FM radio broadcast stations.[51–54]

9.a. Survey of electromagnetic environment around antenna to determine compliance with guideline and need for compliance measure:

	Cost per station		
	Low	Medium	High
Survey	$1,500	$2,000	$2,500

9.b. Compliance measure 1. Post area exposed to over-standard levels of RF.[b]

	Cost per station		
	Low	Medium	High
Percent of stations for which posting assumed to be appropriate	22%	14%	9%
Cost of signs	$2,000	$2,000	$2,000

9.c. Compliance measure 2. Replace existing FM antenna with new model having smaller grating lobe.[c,d]

	Cost per station		
Number of bays	Low[e]	Medium	High[f]
1	$ 1,750	$ 4,690	$ 6,650
2	3,500	8,300	11,500
3	5,300	12,200	16,725
4	7,000	16,200	22,300
5	8,800	21,100	27,700
6	11,400	24,300	32,850
7	13,200	28,300	38,350
8	15,000	32,700	44,500
9	16,700	36,900	50,275
10	18,500	41,000	56,050
11	20,200	44,700	60,960
12	22,000	50,000	65,870
13	26,000	54,200	73,060
14	27,900	59,300	80,250
16	31,700	67,700	91,720

Table 9. (continued)

9.d. The number of half-wavelength spaced antenna elements required to produce the same gain as single-wavelength spaced antenna elements.[g]

Gain dba	Number of antenna elements		Ratio of required elements
	One wavelength spacing	One-half wavelength spacing	
3.0	1.0	1.0	1.000
6.3	2.0	3.4	1.700
8.5	3.0	5.4	1.800
10.0	4.0	7.5	1.875
10.9	5.0	9.4	1.875
11.7	6.0	11.3	1.875
12.4	7.0	13.1	1.875
12.9	8.0	15.0	1.875
13.5	9.0	16.9[h]	1.875
14.0	10.0	18.8[h]	1.875
14.5	11.0	20.6[h]	1.875
14.9	12.0	22.5[h]	1.875
15.2	13.0	24.4[h]	1.875
15.6	14.0	26.3[h]	1.875
16.2	16.0	30.0[h]	1.875

9.e. Compliance measure 3. Replace existing FM antenna with new antenna whose elements are spaced $\lambda/2$ apart.[c,d,i]

Number of bays	Cost per station		
	Low[e]	Medium	High[f]
1	$ 1,750	$ 4,690	$ 6,650
2	5,950	14,110	19,550
3	9,540	21,960	30,105
4	13,125	30,375	41,813
5	16,500	39,550	51,950
6	21,375	45,575	61,600
7	24,750	53,075	71,900
8	28,125	61,325	83,450
9	31,325	69,200	94,275
10	34,700	76,875	105,100
11	37,875	83,825	114,300
12	41,250	93,750	123,500
13	48,750	101,625	137,000
14	52,325	111,200	150,475
16	59,450	126,950	171,975

Table 9. (continued)

9.f. Compliance measure 4. Lease space for an FM radio broadcast antenna on another, existing tower.

	Cost per station		
	Low	Medium	High
Equipment[j]	$17,000	$23,000	$27,000
Lease	29,750[k]	59,500[l]	89,250[m]
TOTAL	$46,750	$82,500	$116,250

9.g. Compliance measure 5. Build taller tower on same site as existing tower.[n,o,p]

	Cost per station		
Height (≤) of new tower (ft)	Low[q]	Medium	High[r]
50	$14,100	$24,500	$ 32,800
75	15,700	26,800	35,900
100	17,300	29,200	39,000
125	19,600	32,600	43,500
150	21,900	36,000	48,000
175	24,100	39,200	52,300
200	26,500	42,800	57,000
250	30,500	48,700	64,800
300	36,100	56,900	75,700
350	46,700	72,600	96,500
400	54,000	83,400	110,700
500	81,800	105,900	130,000

9.h. Compliance measure 6. Building new tower on new site.[n,o,p]

	Cost per station		
Height (≤) of new tower (ft)	Low[n]	Medium	High[o]
100	$60,000	$117,500	$175,000
150	62,500	120,750	179,000
200	65,000	124,500	184,000
250	67,500	128,250	189,000
300	70,000	132,000	194,000
350	75,000	140,000	205,000
400	80,000	151,000	222,000
500	95,000	180,000	265,000

Table 9. (concluded)

Notes for Table 9.

[a] Costs, in 1983 dollars, are for a series of alternative compliance measure options available to an individual FM radio station. The three cost levels reflect variations in equipment configuration, installation conditions, transportation, broadcast conditions and other factors too numerous and station-specific to address for each individual station.

[b] This compliance measure was analyzed only for its effect on the overall cost of compliance. The results reported in this study assume that posting will not be permitted as a positive compliance measure.

[c] Side-mounted, circularly-polarized FM broadcast antennas.

[d] Does not include panel antennas. Prices vary widely depending on the quality of antenna, power rating, how the power is fed to the elements and whether or not the antenna is equipped with deicing or radome all-weather protection excludes low cost "educational" models developed for low power educational stations.

[e] Does not include deicers.

[f] Includes deicers.

[g] Source: plots in Figure 18.

[h] Projections beyond lower curve in Figure 18.

[i] Costs for single-wavelength-spaced antennas in Table 9.c are adjusted by the ratio shown in Table 9.d.

[j] Costs assume half the stations use their existing antennas. Therefore, the costs (low, medium, high) for a 3-bay $\lambda/2$ wave antenna shown in Table 9.e are multiplied by 0.50, to which is added $12,000 for structural analysis and certification. One third of the multiple FM stations are assumed to share an antenna with another station; therefore, in the cost models, the cost shown is multiplied by the factor (1 - (1/3 * 1/2)) for MFM stations.

[k] Assumes annual lease payments of $3,000, discounted over 50 years at 10.0%.

[l] Assumes annual lease payments of $6,000, discounted over 50 years at 10.0%.

[m] Assumes annual lease payments of $9,000, discounted over 50 years at 10.0%.

[n] Tower costs vary widely and depend on site location, size and accessibility, shipping distance and mode, soil load bearing capability, wind and ice loading, height, whether guyed or self-supporting, transmission line used, aviation lighting, local building code requirements and the installation of elevators. Normal transport and installation of tower and antenna are included. Transmitter-associated hardware and some transmission line are excluded.

[o] Assumptions regarding distribution of antennas among compliance measures 4, 5, and 6 (all basically involve relocating the antenna to a taller tower) can be found in Table 8.

[p] In the cost models, it is assumed that half the stations use their existing antennas. The other half are assumed to use a 3-bay $\lambda/2$ wave antenna, the costs for which are multiplied by 0.50 (see Table 9.e) and added to the cost of the tower. One third of the multiple FM stations are assumed to share an antenna and tower with another station; therefore, in the cost models, the cost shown is multiplied by the factor (1 - (1/3 * 1/2)) for MFM stations.

[q] Includes new tower shipped, installed, painted and with power; new transmission line, FCC and FAA application and building permits.

[r] Includes new tower shipped, installed, painted and with power; new transmission line, site improvements, studio-transmitter link, remote control system, FCC performance testing, FCC and FAA application and building permits.

Table 10. Costs of compliance measures for AM radio broadcast stations.

10.a. Survey of electromagnetic environment around tower to determine compliance with guideline and need for compliance measure.[51-54]

	Cost per station		
	Low	Medium	High
Survey	$1,500	$2,000	$2,500

10.b. Compliance measure applicable to AM: fencing to positively keep the public out of areas exposed to over-standard levels of RF.[55]

	Cost per station		
	Low	Medium	High
Fencing per foot	$ 6	$ 9	$ 12
Gate	400	600	800

SOCIETY-AT-LARGE COST MODEL

This model is shown schematically in Fig. 19. The analysis begins with the EPA data base, which provides some of the input to the signal propagation models. The EPA propagation models estimate the signal strength or power density of each broadcast station. These are then analyzed with respect to the 18 alternative guidance levels. The EPA models sort through the appropriate compliance measures (Table 4), applying them in sequence. If, to meet a given guidance level, the first applicable measure is not sufficient to reduce a station's power density, the program selects and tests the next measure, and so on. The result is that each station is estimated to be in compliance with each of the 18 guidance levels by the application of at least one compliance measure.

The social cost model takes these data as input, costs the chosen measure for each station, adds the cost of the electromagentic survey and calculates the component and gross cost, annual "cash flow" (undiscounted) cost and the present (discounted) value of the total cost of compliance for each of the 18 guidance levels analyzed using three cost levels. As is typical with large projects, virtually all the costs occur when compliance is required. Benefits would occur over a long period of time.

To compare current year dollar expenditures with future year expenses and benefits, all dollar values are brought into equivalence by discounting future values to the year of analysis. The fundamental problem with comparing unadjusted dollar values from different years is that current year dollars are more valuable than future dollars. If given a choice, the prudent decision-maker will always prefer to receive a sum of dollars

Table 11. Costs of compliance measures for TV broadcast stations.[51-54,56]

11.a. Survey of electromagnetic environment around tower to determine compliance with guideline and need for compliance measure.[51-54]

	Cost per station		
	Low	Medium	High
Survey	$1,500	$2,000	$2,500

11.b. New Antenna[a]

	Cost per station		
	Low	Medium	High
VHF-TV[b]	$240,000	$480,000	$960,000
UHF-TV	150,000	300,000	600,000

11.c. Tower replacement.[c,d]

	Cost per station		
Height of new tower (ft)	Low	Medium	High
100[e]	$ 57,000	$ 76,000	$ 83,600
200	120,000	160,000	176,000
300	174,000	232,000	255,000
400	262,500	350,000	385,000
500	360,000	480,000	528,000
600[f]	270,000	360,000	396,000
700	307,500	410,000	451,000
800	343,500	450,000	503,800
900	396,750	529,000	581,900
1000	483,750	645,000	709,500
2000	1,875,000	2,500,000	2,750,000

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[a] Installed.

[b] Custom design doubles the cost of these antennas over the normal cost. VHF antennas are amenable to design change, UHF's are not.

[c] Tower costs vary widely and depend on site location, size and accessibility, shipping distance and mode, soil load bearing capability, and wind and ice loading, height, whether guyed or self-supporting, transmission line used, aviation lighting, local building code requirements and the installation of elevators. Normal transport and installation of tower and antenna are included. Transmitter, associated hardware, and some transmission line excluded. These costs assume replacement of an existing tower on the same site; no major site preparation except required tower footings is included.

[d] Includes new tower installed, painted and with power; new transmission line, transportation, FCC and FAA application and building permits.

[e] Self-supporting towers.

[f] Guyed towers.

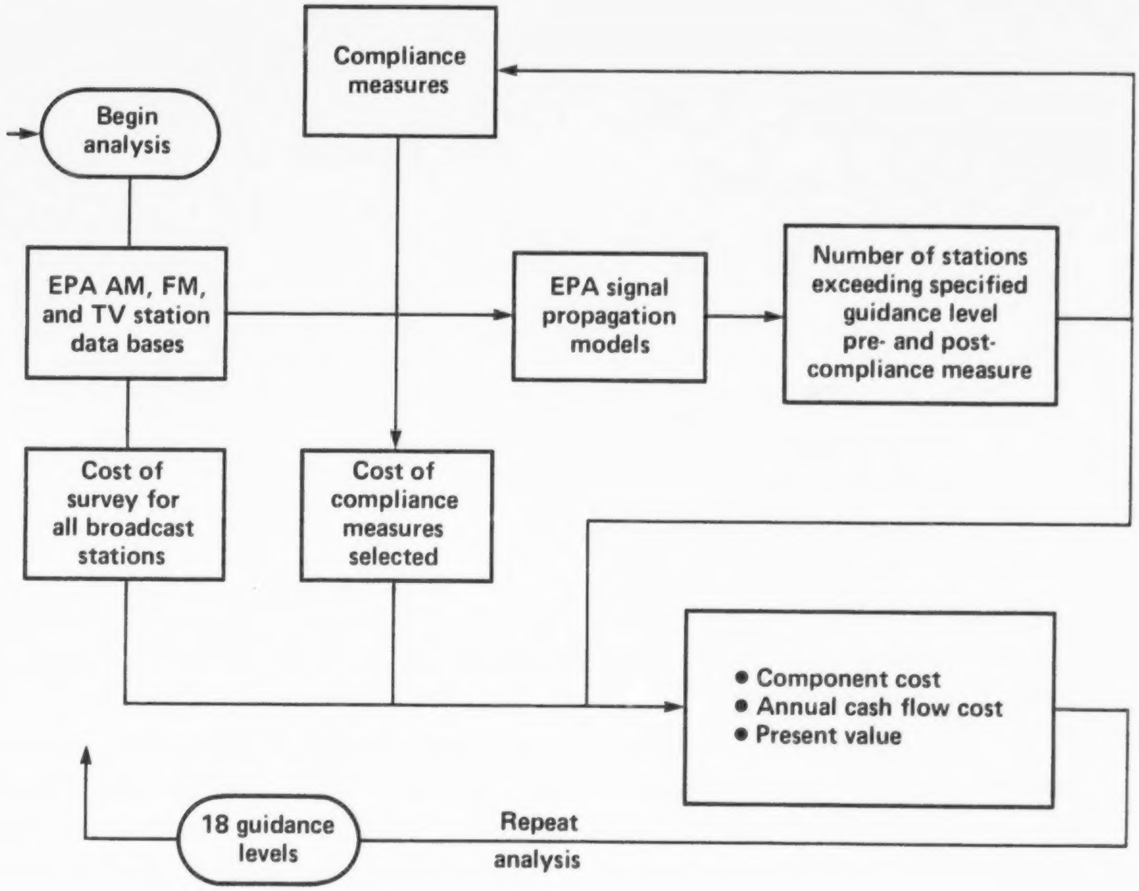
Compliance measures
Begin analysis
EPA AM, FM, and TV station data bases
EPA signal propagation models
Number of stations exceeding specified guidance level pre- and post-compliance measure
Cost of survey for all broadcast stations
Cost of compliance measures selected
• Component cost
• Annual cash flow cost
• Present value
18 guidance levels
Repeat analysis

Figure 19. The society-at-large cost model estimates the cost to society of guidance limiting public exposure to RF; the model calculates the component and gross total compliance cost, annual "cash flow" cost and total present value of 18 alternate guidance levels at three cost levels.

immediately rather than the same face value in the future because the dollars received now can be invested or loaned and the value thereby increased. Discounting adjusts the stated current year dollar values so that an equitable comparison can be made exclusive of this consideration.

The basic formula for discounting to obtain the present worth for a uniform annual value is given by:

$$PV = A \quad \frac{(1 + n)^n - 1}{i\,(1 + i)^n}, \qquad (2)$$

or for a varying annual value,

$$PV = \sum_{k=1}^{n} A\,(1 + i)^{-k}, \qquad (3)$$

where

PV = net present value,
A = annual value,
i = discount rate,
n = total years of analysis, and
k = individual year of analysis.

The fundamentals of time value, equivalence and comparison of money values can be found in a number of texts.[51-64]

In the present cost analysis, only the lease portion of compliance measure 4, applicable to FM radio stations, occurs over a period of time. This cost was discounted over 50 years (equivalent to the life of a tower) at 10.0%, the rate suggested by OMB for this kind of analysis. Inflation can be ignored and costs and benefits valued in constant year dollars if the discount rate takes this into account.[65-66]

The costs are calculated first in terms of the gross component costs for the survey and the compliance measures required. The total of these two divided by five yields the annual "cash flow" cost under the assumption that compliance for the industry would be spread over five years among equal-sized groups or cohorts of stations. This assumption is a way of representing the time that may be involved in surveying for compliance, hiring an engineering firm, determining the appropriate solution, designing the changes, manufacturing the equipment, especially innovative antennas, and installing and certifying the new equipment. Stations will be affected differently by this sequence of steps to compliance, depending on the type of change necessary, complexity of overall broadcast equipment, and availability of engineering services and the necessary equipment.

The total gross cost to society of the guideline limiting public exposure to RF from AM, FM and TV broadcast is given by:

$$TGC = TCS + TCC \ , \qquad (3)$$

where

TGC = total gross cost of compliance,
TCS = total gross cost of survey for all stations, and
TCC = total cost of compliance measures required.

The annual "cash flow" cost (ACF) of compliance for a given cohort is given by:

$$ACF = TGC/5 \ , \qquad (4)$$

The present value (PV) of the cost to society-at-large of the guidance is given by:

$$PV = \sum_{k=1}^{5} ACF\,(1.10)^{-(k-1)}, \qquad (5)$$

where

PV = the social cost present value, and
ACF = the annual "cash flow" cost of compliance.

These social costs can be incorporated into a full cost-benefit analysis with the appropriate definition and valuation of benefits. Refer to Appendices A, B, and C for detailed explanations and examples of these calculations.

INDUSTRY COST MODEL

It is of interest to estimate the actual effect of the guidance on the broadcast industry, taking into account the cost of borrowing money for the required capital improvements, the effect on corporate taxes, and the net impact on annual cash flow.

Reference to Fig. 20 will show that the industry cost model is the same as the social cost model through the calculation of the total cost of all compliance measures required for stations exceeding a specified guidance level. From this point, the costs are segregated according to net cash flow and tax impact, in accordance with standard techniques of evaluating projects in a business decision-making context.[67-70] Finally, the net cost of the project is determined from the cash flow and tax benefit estimates.

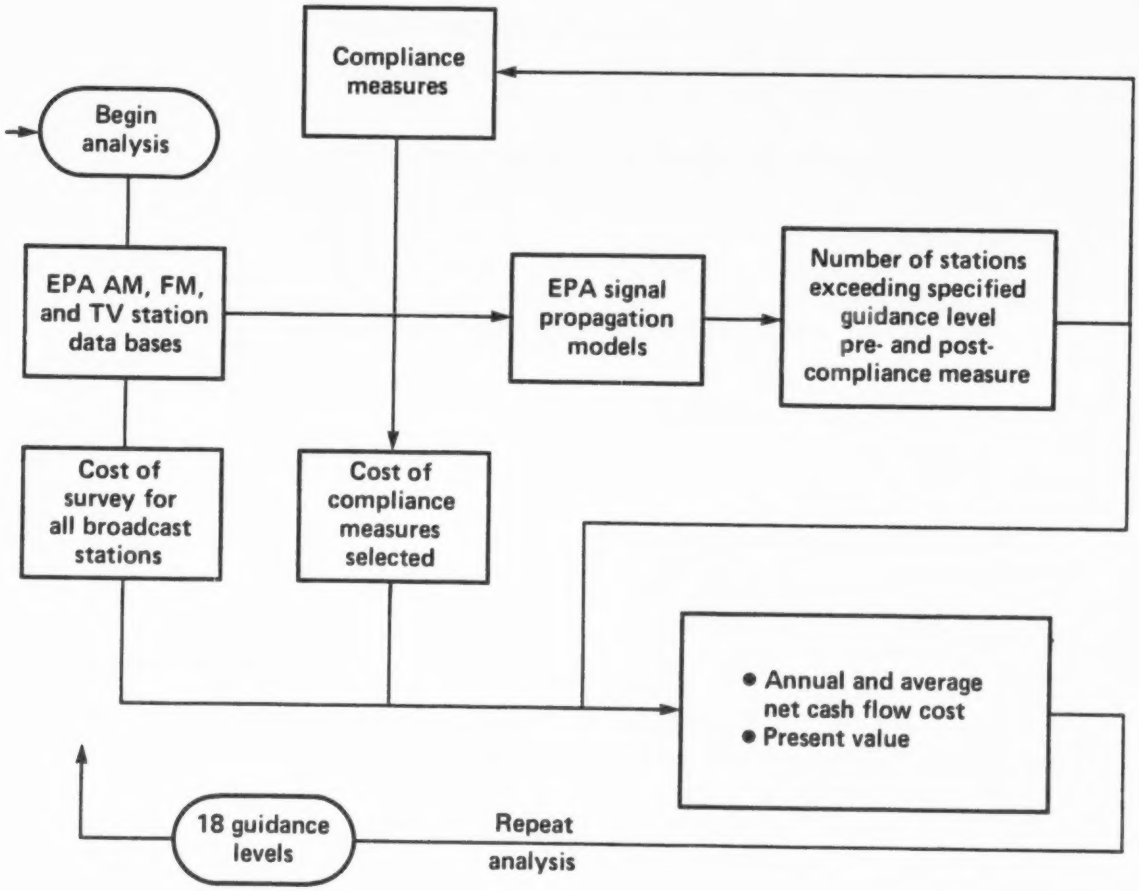
Compliance measures
Begin analysis
EPA AM, FM, and TV station data bases
EPA signal propagation models
Number of stations exceeding specified guidance level pre- and post-compliance measure
Cost of survey for all broadcast stations
Cost of compliance measures selected
• Annual and average net cash flow cost
• Present value
18 guidance levels
Repeat analysis

Figure 20. The industry cost model estimates the cost to the broadcast industry of guidance limiting public exposure to RF radiation; the model calculates the annual and average net cash flow and total present value of the cost of compliance of 18 alternative guidance levels at three cost levels.

The present value analysis and the cost of capital are both computed using 10% as the rate, as directed by the EPA. Interest increases the gross expense of the compliance measure but is deductible from gross income and has an effect on the taxes owed.

Tangible property is segregated from intangible expenses because they are treated differently for tax purposes. Tangible property is subject to depreciation and investment tax credit; intangible costs are subtracted from pre-tax profit ("expensed"), generally in the year of occurrence. In this analysis, the lease portion of compliance measure 4 for FM stations and the survey are considered intangible costs and are expensed. For each cohort of stations, the gross annual cash flow cost of compliance with an RF standard consists of:

$$GCF(k) = TCS(k) + DP(k) + LSE(k) + AM(k) + IN(k)\ , \qquad (6)$$

where

GCF = gross cash flow cost,
LSE = lease costs,
DP = down payment,
AM = annual loan amortization payments,
IN = interest on loan,
TCS = total cost of a survey, and
k = year of cost.

The reduction in tax or tax shelter, is given by

$$TS(k) = TR \cdot EX(k) + TR \cdot DPN(k) + TR \cdot IN(k) + ITC(k)\ , \qquad (7)$$

where

TS = tax shelter,
TR = the marginal tax rate applicable to corporate income above $100,000, 0.46,
EX = expensed costs (TCS, LSE),
DPN = depreciation of tangible assets,
I = interest,
ITC = investment tax credit (assumed to be 10%), and
k = year of analysis.

The net annual cash flow cost of compliance for the industry is determined by the following:

$$NCF(k) = GCF(k) - TS(k)\,, \tag{8}$$

where

NCF = net cash flow cost of compliance,
GCF = gross cash flow cost,
TS = tax shelter, and
k = year of analysis.

The NCF for the five cohorts is calculated by dividing the total cash flow cost for the industry by 5:

$$CNCF(k) = NCF(k)/5\,, \tag{9}$$

where

CNCF(k) = the cohort net cash flow cost in year k.

The net cash flow cost of compliance for each of the five cohorts of stations is spread out over six years with each succeeding cohort beginning its six-year expense one year after the preceeding one. Thus, total industry costs are spread over 10 years (5 cohorts of stations, each with expenditures over 6 years). The guidance for each cohort is assumed to be implemented in year zero, during which the electromagnetic survey is conducted, the equipment ordered, down payment (25%) made and investment tax credit taken. During the subsequent five years, the loan is amortized (equal annual principal reductions in accordance with typical commercial line of credit terms), interest paid (annually) and deducted, and depreciation is taken in accordance with the federal tax code accelerated capital recovery system,[71] in contrast to the social cost analysis, which assumes each cohort incurs its costs in one year. The CNCFs are staggered in relation to the following cohort's CNCFs. Therefore, their sum in years k=1 is CNCF (k=1) for the first cohort; the sum of the second year is CNCF (k=2) for cohort 1 plus CNCF (k=1) for cohort 2 and so on. The yearly sums are denoted TNCF(k).

An average NCF is derived as follows:

$$ANCF = \sum_{k=1}^{10} TNCF(k)/10\,, \tag{10}$$

where

ANCF = average annual net cash flow cost.

The industry present value is calculated by discounting the entire ten-year cost stream at 10%, as directed by the EPA, as follows:

$$PV = \sum_{k=1}^{10} TNCF(k)/(1.10)^{(k-1)} . \tag{11}$$

Refer to Appendices A, B, and C for detailed explanations and examples of these calculations.

AVERAGE FIRM COST MODEL

A more specific analysis was conducted to estimate the effects of the guideline on the average AM, FM, or TV broadcast firm. The individual firm cost model is shown in Fig. 21. It is identical to the social and industry cost models through the calculation of the total cost of all compliance measures required for stations exceeding the specified power density level. From these total industry-wide costs, the average cost for an individual AM, FM, or TV broadcast firm is calculated. The average pre-tax operating profit for profitable AM, FM, and TV broadcast firms[72] was used to create a pro forma profit and loss statement for an average firm in each of the three sectors of the broadcast industry. The additional expenses of compliance are subtracted from gross income; net income is then a function of the tax credit and depreciation, which is substituted for amortization for tax purposes. The analysis assumes that operating profit remains stable throughout the period of analysis, a year "zero" during which the guidance is implemented and five years of loan payments. The impact of compliance on net (after tax) income in years zero to 5 is compared with the assumed net income prior to implementation of the guideline. The financial and ownership structure and tax situation of individual firms are not known; therefore it was assumed that the profit calculated is taxed according to the current corporate tax rate schedule.[73] The costs of compliance for each of the three segments of the industry are averaged over the number of stations requiring a compliance measure at each of the 18 guidance levels analyzed to provide average costs for this analysis.

The effect of compliance with the RF guidance on the average AM, FM, or TV station net profit is estimated in a series of calculations beginning with the gross pre-tax cash flow cost, as follows:

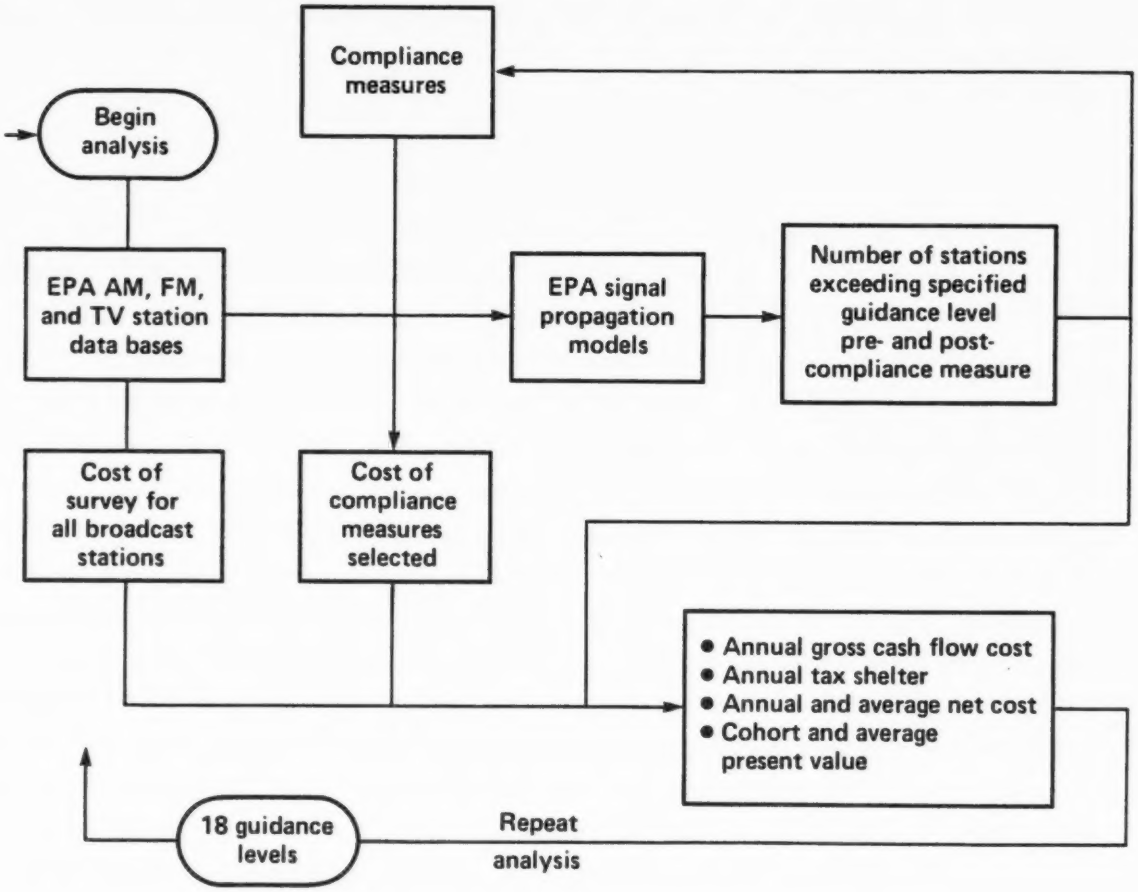
Compliance measures
Begin analysis
EPA AM, FM, and TV station data bases
EPA signal propagation models
Number of stations exceeding specified guidance level pre- and post-compliance measure
Cost of survey for all broadcast stations
Cost of compliance measures selected
• Annual gross cash flow cost
• Annual tax shelter
• Annual and average net cost
• Cohort and average present value
18 guidance levels
Repeat analysis

Figure 21. The average broadcast firm model estimates the cost to the average station of a guideline limiting public exposure to RF radiation; the model takes into account the tax effects and calculates the net after tax profit, the annual gross and net cost and the present value of the cost of compliance with 18 alternative guidance levels at three cost levels.

$$AOIA(k) = AOIB(k) - AGCF(k) , \qquad (12)$$

where

AOIA = average (AM, FM, or TV) firm pre-tax operating income net of average gross cash flow compliance costs,

AOIB = average (AM, FM, or TV) firm pre-tax operating income as reported in Ref. 72,

AGCF = the average cost of compliance for an individual AM, FM, or TV firm (GCF ÷ total number of [AM, FM, or TV] stations requiring a compliance measure at each power density level), and

k = year of analysis.

Expensed costs, interest (both of which are included in AGCF, above) and depreciation affect the computation of corporate income tax liability as follows:

$$ATOI(k) = AOIA(k) + ADP(k) + AAM(k) - ADPN(k) , \qquad (13)$$

where

ATOI = average taxable operating income,

AOIA = average firm pre-tax operating income net of average gross cash flow compliance costs,

ADP = average down payment,

AAM = average loan amortization,

ADPN = average depreciation allowance, and

k = year of analysis.

The gross tax liability is calculated using the corporation tax rate schedule found in Ref. 73.

The net tax liability and net profit are calculated as follows:

$$ANIA(k) = AOIA(k) - ANT(k) , \qquad (14)$$

where

ANIA = average net firm after-tax profit,

AOIA = average firm income after compliance and before taxes,

ANT = average net taxes = AGT - AITC,

k = year of analysis, and

where

AGT = average gross tax, and

AITC = average investment tax credit (10% of tangible capital investment), taken in the year of purchase (assumed to be first year of compliance).

The net after tax cash flow cost of compliance for the average broadcast firm is given by:

$$NCC(k) = AGCF(k) - ATSA(k)\ , \tag{15}$$

where

NCC = net cost of compliance,

AGCF = average gross cash flow cost of compliance,

ATSA = average tax savings, (ANTB - ANT(k)),

where

ATSB = average net taxes in the year prior to the guideline,

ANT(k) = average net tax in year k, and

k = year of analysis.

The average net cost of compliance is calculated from the annual net cost as follows:

$$ANCC = \sum_{k=1}^{6} NCC(k)/6\ . \tag{16}$$

The present value cost for the average firm is calculated by discounting the first year and five subsequent years. Each cohort's present value cost is calculated separately. Because there are five cohorts, each realizing costs in succeeding years, the PV of a firm in the last cohort will be substantially less than the PV of a firm in the first cohort. The present value for a firm in each cohort is calculated as follows:

$$PV(c) = \sum_{k=1}^{5} NCC(k)/(1.1)^{k-2+c}, \tag{17}$$

where

PV(c) = the present value of the cost of compliance for the average firm in cohort c,

i = cohort 1, 2, 3, 4, or 5,

k = year of expenditure for the average firm, and

$NCC(k)$ = annual net cost of compliance in year k.

An average present value cost is derived by calculating the mean of the present value for the five cohorts.

$$APV = \sum_{c=1}^{5} PV(c) \;/5 . \tag{18}$$

A separate analysis was completed of the impact of compliance on the average unprofitable broadcast firm. The results, given the generalized assumptions made for this analysis, are similar to profit-making firms in terms of net cost of compliance. The expenditures for compliance do not, of course, help unprofitable firms improve their income statements.

An analysis was completed of the maximum and average effect of compliance with the guidance on net profit in terms of percent decline in profit (profitable stations) or percent increase in loss (unprofitable stations) as follows:

$$MPE = MNCC/ANPB , \tag{19}$$

where

MPE = the maximum annual percent effect on net profit or loss,

MNCC = the maximum annual net cost of compliance, and

ANPB = the average net profit or loss in the year prior to compliance.

A similar analysis was completed of the average, as opposed to the maximum effect on profit or loss as follows:

$$APE = ANCC/ANPB , \tag{20}$$

where

APE = the average annual percent effect on net profit or loss,

ANCC = the average annual net cost of compliance for the average firm, and

ANPB = the average net profit or loss in the year prior to compliance.

A separate program aggregates the AM, FM, and TV industry segment results for the social cost and industry cost analysis to create industry-wide results.

SUMMARY OF ASSUMPTIONS

Throughout the preceeding discussion of method of approach, compliance measures and cost models, a series of assumptions were used. These are assembled below for convenient reference.

GENERAL ASSUMPTIONS

1. AM, FM, and TV stations will select compliance measures in the order of increasing cost used in this analysis.
2. The propagation models, calibrated by a field test program by the EPA, accurately estimate power density propagation; no adjustments need be made for any known biases in these models.
3. For the social cost analysis, all expenses for each cohort of stations are assumed to occur in the year of implementation.
4. For the industry cost and average firm cost analyses, the year of implementation of a guideline is known as "year zero;" expenses are spread out over the following five years. The financial effects of compliance on the average firm are compared with a base year immediately prior to year zero.
5. For all analyses, stations are assumed to comply in five equal annual cohorts.
6. Positive compliance measures are assumed (those that physically prevent public access to RF over the standard). However, the effect of allowing FM stations with remotely located antennas to post warning signs, an inexpensive measure, was analyzed for its effect in reducing the cost of the guideline. For this special analysis, it was assumed that 22%, 14% and 9% of FM stations could post signs for the low, medium and high cost analyses, respectively.
7. All stations are assumed to require a survey of the electromagnetic environment around their towers, whether a compliance measure is needed or not. This assumption may not actually be necessary to implement a guidance because the EPA may be able to devise a self-screening procedure that stations can use to determine on a first-cut basis whether or not a more detailed survey is needed.
8. For the industry and firm cost models:
    a) Capital equipment is purchased at 25% down with 5 annual equal payments, and
    b) Interest is assumed to be 10% as directed by the EPA.
9. A common discount rate of 10% was used in all analyses.

10. For the industry analysis, the tax shelter aspects of the calculations use the top corporate tax rate, 46%.
11. For the individual firm analysis, the corporate tax is calculated according to the federal tax rate schedule.
12. Assumptions for tax shelter used in the individual firm analysis result in identical net costs to profitable and unprofitable stations. It is assumed for this analysis that the losses are passed on to some corporate, partnership or individual tax entity that uses the losses as a deduction.

ASSUMPTIONS FOR FM RADIO STATIONS

1. Stations with tower-mounted antennas were included; building-mounted antennas were not.
2. Both single-mounted and co-mounted antennas on one tower or antenna farms were included.
3. Compliance measures were generally applied in the order of increasing cost.
4. For compliance measures involving replacement of antennas, the old antenna was replaced with one of equivalent ERP.
5. Because the EPA data base contains only 3895 (89%) of the 4374 FM radio stations, it was assumed that the larger group of FM stations contain the same ratio of antenna types, tower heights, ERP, etc. as the group in the data base. Thus, each group of FM stations was increased by 4374 ÷ 3895 = 1.123.
6. On the basis of professional judgment, those FM stations that could not achieve compliance using fixes 2 or 3 were distributed among compliance measures 4, 5, and 6 (Table 15) according to the percentages given in Table 8.
7. It is assumed for compliance measures 4, 5, and 6 that half the stations can use their existing antennas; the cost of a 3-bay, $\lambda/2$ antenna (Table 9.e) was multiplied by 0.5 and added to the cost of a structural analysis for compliance measure 4 ($12,000), and to the cost of a new tower for compliance measures 5 and 6.
8. One third of the stations with antennas co-located on towers with other FM stations are assumed to relocate with another station if compliance measure 4, 5, or 6 is used, reducing the cost of these measures by 1/6 for these stations as a whole (1/3 of stations x 1/2 cost).
9. The EPA-FCC data on antenna height are based on the center of ERP; therefore, for costing purposes, 25' was added to the height of each tower needed for compliance measures 5 and 6; 25' is half the average height of a typical 6-bay FM antenna.

ASSUMPTIONS FOR AM RADIO STATIONS

1. Varying percentages of AM stations were assumed to have existing adequate fencing (see Table 5) reducing the overall cost of compliance accordingly.
2. The area fenced is assumed to be square; the fence contains one 20' gate for vehicular access.

ASSUMPTIONS FOR TV BROADCAST STATIONS

1. It is assumed that TV antennas can be modified in a manner similar to that of FM antennas to reduce downward radiation from grating lobes.

SUMMARY OF RESEARCH RESULTS

The results of the economic study are presented in the following series (at the end of this section) of summary figures (Figs. 22-49) and tables (Tables 12-17); more detailed data are given in Volume II, Appendices D-G. The presentation of the summary results is organized into the following sequence: total (FM, AM, TV) social cost, total industry cost, FM average firm, AM average firm, TV average firm, FM-AM-TV cost distribution, compliance measure component cost analysis, FM compliance measure one cost analysis, and number of stations affected by the guidelines.

What are the costs to the society-at-large of the proposed guideline limiting public exposure to RF from broadcast sources? Figures 22 and 23 at the end of this section give the range (low, medium, and high cost assumptions) of the cost to society-at-large of a guidance limiting public exposure to RF from AM, FM, and TV broadcast sources for 6 of 18 guidance levels analyzed. Figure 22 shows the cost in terms of total present value; Figure 23 shows the annual cash flow cost. The PV of the cost to society varies from a maximum (high cost assumptions) of $866.6 million for guidance level 1 to a minimum (low cost assumptions) of $12.7 million for guidance level 18. The cash flow cost to society varies from $207.8 million to $3.1 million. Data for these figures are identified in Table 12 at the end of this section and also in Table G-1 in the Appendix.

How much will the proposed guidelines cost the broadcast industry as a whole? In contrast to the cost to society, the PV of the cost of the guidelines to the total broadcast industry (Fig. 24) varies from $414.6 million to $6.9 million. The average net after tax CFC of the cost of compliance for the total broadcast industry (Fig. 25) is also less than the equivalent cost to society, varying from $59.1 million to $0.8 million. Data for these figures are identified in Table 13 at the end of this section and also in Table G-2 in the Appendix. The lower costs to industry as contrasted with the costs to society result from the difference in definitions of the two costs. The cost to society-at-large is defined as including all the opportunity costs (costs of using resources for one use and foregoing the opportunity to use them for other uses); the cost to industry is an estimate of the net cost and includes transfer payments not considered in the social cost, such as tax deductions and credits and interest on funds assumed borrowed for the compliance measures.

The next 12 figures show the range of the estimated cost of compliance for the average (FM, Figs. 26-29; AM, Figs. 30-33; TV, Figs. 34-37) broadcast station in terms of average PV, average net CFC, and the maximum and average reduction in net profit resulting from the net CFC cost of compliance; all shown for 6 of 18 guidance levels. The average present value of the cost of compliance for the average broadcast station varies from $40.6 thousand (FM-Fig. 26), $7.9 thousand (AM-Fig. 30), $285.3 thousand (TV-Fig. 34) at guidance level 1 to $4.8 thousand (FM), $1.3 thousand (AM), $0.7 thousand (TV) at guidance level 18. The average CFC is estimated to vary from a maximum of $9.7 thousand (FM-Fig. 27), $1.8 thousand (AM-Fig. 31), $67.8 thousand (TV-Fig. 35) at guidance level 1 to a minimum of $1.1 thousand (FM), $0.3 thousand (AM), $0.1 thousand (TV) at guidance level 18. The estimated reduction in profit associated with the maximum cash flow cost for compliance over six years for the average broadcast station is shown for FM (Fig. 28), AM (Fig. 32), and TV (Fig. 36) and varies from a maximum of 16.4% (FM) at guidance level 1 to 0.10% (TV) at guidance level 18. The reduction in net profit associated with the average cash flow cost for compliance over six years for the average broadcast station is shown for FM (Fig. 29), AM (Fig. 33), and TV (Fig. 37) and varies from a maximum of 10.1% (FM) at guidance level 1 to 0% (TV) at guidance level 18. Data for these figures are identified in Table 14 at the end of this section and in Tables D-3, E-3, F-3, and G-3 in the Appendix.

The net effect of the maximum annual net after tax cash flow cost of compliance on unprofitable broadcast stations is the same in absolute dollar terms as for profitable stations but the percentage effect varies with the guidance level and the cost level. The average unprofitable FM radio station loses 18% more than the average profitable station makes net of taxes,[72] so the same cost of compliance will be a smaller percentage addition to the average losses than reduction in the average profit. The average unprofitable FM station will experience an average increase in net losses varying from about 19% (guidance level 1 - high cost) to about 1% (level 18 - low cost). The average unprofitable AM radio station loses 8% less than the average profitable station makes net of taxes,[72] so the same compliance costs will be a greater percentage of losses than profits. The average unprofitable AM station will have average increased losses ranging from about 3% (guidance level 1 - high cost) to less than 1% (level 18 - low cost). The average unprofitable TV broadcast station loses only 31% as much as the average profitable station makes net of taxes[72] so the same absolute dollar cost of compliance will be several times greater in percentage terms for unprofitable stations than for profitable ones. The average unprofitable TV station will experience increased losses ranging from about 27% (guidance level 1 - high cost) to especially zero (guidance level 18 - low cost).

The general pattern of all costs (and the number of stations requiring a compliance measure at a given guidance level) is clear; the cost of the guidance drops dramatically from guidance level 1 (1 $\mu W/cm^2$ - FM/TV RF units), the most stringent analyzed, to about 4 (20 $\mu W/cm^2$), then falls rapidly to about 9 or 10 (400 $\mu W/cm^2$) and more gradually to guidance level 18 (10,000 $\mu W/cm^2$), the least stringent level analyzed.

How do the three major segments of the broadcast industry compare in the share of the costs of the guideline attributable to them? An analysis of the distribution of costs among the three industry segments was made using the medium level PV of the cost to society; the distribution is shown in Fig. 38 for 6 of the 18 guidance levels. At guidance level 1, the cost of compliance for TV broadcast stations predominates because the compliance measures are more costly for TV than for radio stations. Thereafter, the number of TV stations requiring a compliance measure drops sharply and FM radio stations dominate the total cost until the last guidance levels are reached, when the relatively larger number of AM stations requiring a compliance measure causes the AM sector to predominate. Even though the number of AM radio stations requiring a compliance measure is greater than the number of FM stations beginning with guidance level 2 (Tables 15-17), the compliance measures for FM stations are more complex and costly than those for AM stations, causing the expenses for the FM segment to exceed those for AM up to guidance level 17. Data for this analysis are identified in Table 12, medium-level TNPV cost to society; also see Tables D-1, E-1, F-1, and E-1 in the Appendix.

The total cost of compliance can be grossly segmented into two components, the cost of a survey of the RF environment around the antenna to determine the need for and extent of mitigation measures required and the cost of the compliance measure itself. The distribution of these two cost components is shown for FM (Fig. 39), AM (Fig. 40), and TV (Fig. 41) based on the medium-level component cost to society-at-large. The consistent pattern is that, at lower, more difficult-to-achieve guidance levels, the cost of the compliance measure predominates. However, at less stringent standard levels (guidance level 12, FM; guidance level 4, AM; guidance level 8, TV) the cost of the survey for all stations exceeds the cost of compliance for those stations requiring it. Data plotted in Figs. 39, 40, and 41 are identified in Tables D-1, E-1, F-1, respectively, in the Appendix.

Although the cost analyses were performed assuming some form of positive compliance, the EPA investigators observed in the course of their work that many FM transmitters are located in remote areas often inaccessible to the public. Therefore we tested the effect on costs of assuming that a percentage of FM stations would be permitted to post warning signs around antennas that emit RF above the guideline. The percentage of stations allowed this inexpensive solution was based on criteria for remoteness developed from population statistics using CED data in conjunction with the geographic location of FM antennas. Allowing FM stations, whose antennas are defined as remote, to post warning signs reduces the cost to society of the guidelines for the FM segment of the broadcast industry at guidance level 1 by up to 20% (Fig. 42) and reduces the cost of compliance to the FM broadcast industry by very nearly 20% (Fig. 43). Reductions in cost at less stringent guidance levels display the same decline as overall costs. When the other two segments of the broadcast industry, which are not affected by the inexpensive posting option, are combined with the FM segment, the overall effect is diluted. The overall cost to society of the guideline is reduced by a maximum of 8% at guidance level 2 (Fig. 44); the overall cost of compliance to the broadcast industry is reduced by about 7.5% at guidance level 2 (Fig. 45). The plots in Figs. 44 and 45 show that cost reductions are depressed at guidance level 1, after which they rise and then resume a pattern consistent with the cost-guidance level relationships discussed earlier. The reason these cost reduction curves increase before decreasing relative to guidance level is that the cost of compliance for TV stations, which is not affected by the posting solution, dominates the total cost at guidance level 1 (see Fig. 38). However, beginning with guidance level 2, the cost of compliance for the FM broadcast sector is higher than the cost for the AM and TV sectors combined, so the cost reduction that is applicable to the FM sector has a greater effect on the aggregate cost of compliance at guidance level 2 than at guidance level 1.

How many stations would require measures to comply with a guideline if it were implemented? The number of stations assumed to require some kind of compliance measure other than the survey is shown for FM (Fig. 46), AM (Fig. 47), and TV (Fig. 48). The assumptions for selection of compliance measures and for differences among the three cost levels result in three distinctly different numbers of AM radio stations requiring compliance measures at the low, medium, and high cost estimates, which is reflected in the three plots in Fig. 47. The number of FM and TV broadcast stations that require a compliance measure is constant across all three cost levels (Figs. 46 and 48). The number of AM stations varies with the cost level because assumptions were made about the proportion of stations already fenced at the three cost levels (see Table 5). The percentage distribution of the number of FM, AM, and TV stations requiring a compliance measure is shown in Fig. 49 at 6 of the 18 guidance levels studied. This distribution differs from that shown for costs in Fig. 38 for two reasons. First, though the number of stations actually requiring a compliance measure declines to very small numbers at the less stringent guidance levels, all stations were assumed to require a survey (and the associated cost) at all guidance levels. Further, the cost of compliance for TV broadcast stations is disproportionately costly relative to the number of TV stations requiring a compliance measure. Data for Figs. 46-48 are identified in Tables 15, 16, and 17 at the end of this section and also in Tables D-4, E-4, and F-4 in the Appendix.

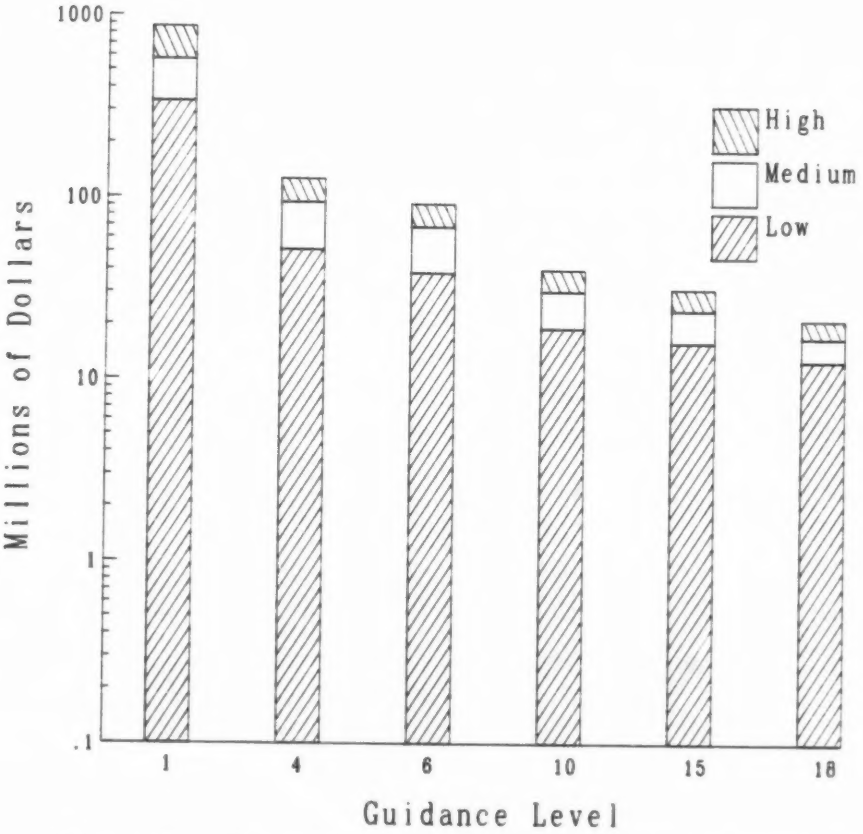

Figure 22. The range of total present value (constant dollar) cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from AM, FM, and TV broadcast sources is shown for 6 of 18 guidance levels studied.

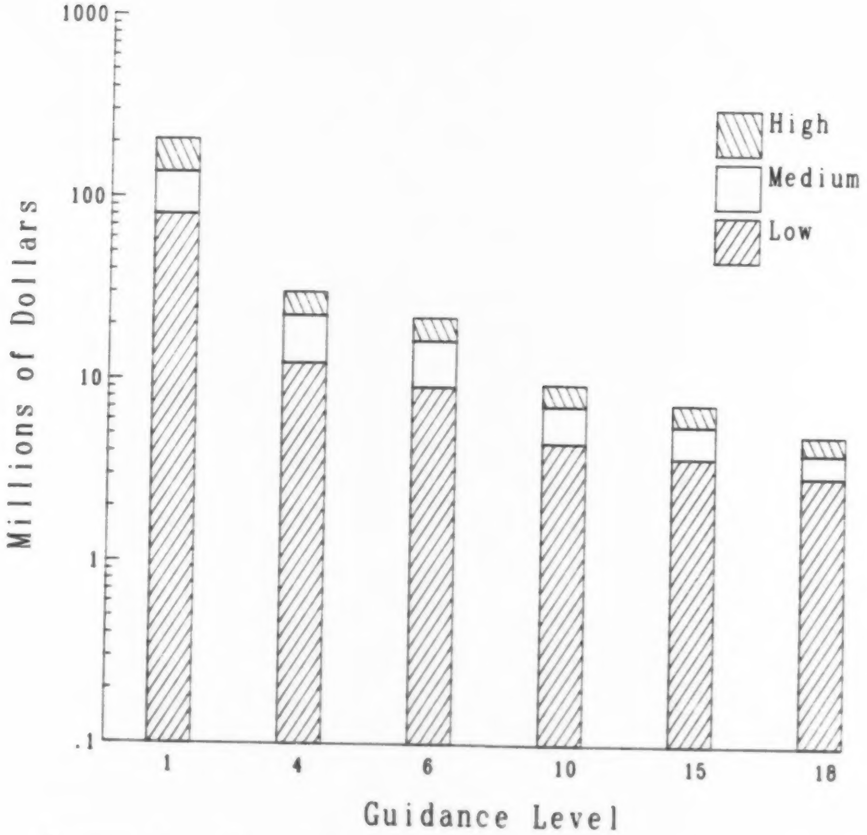

Figure 23. The range of annual cash flow (current year dollar) cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from AM, FM, and TV broadcast sources is shown for 6 of 18 guidance levels studied.

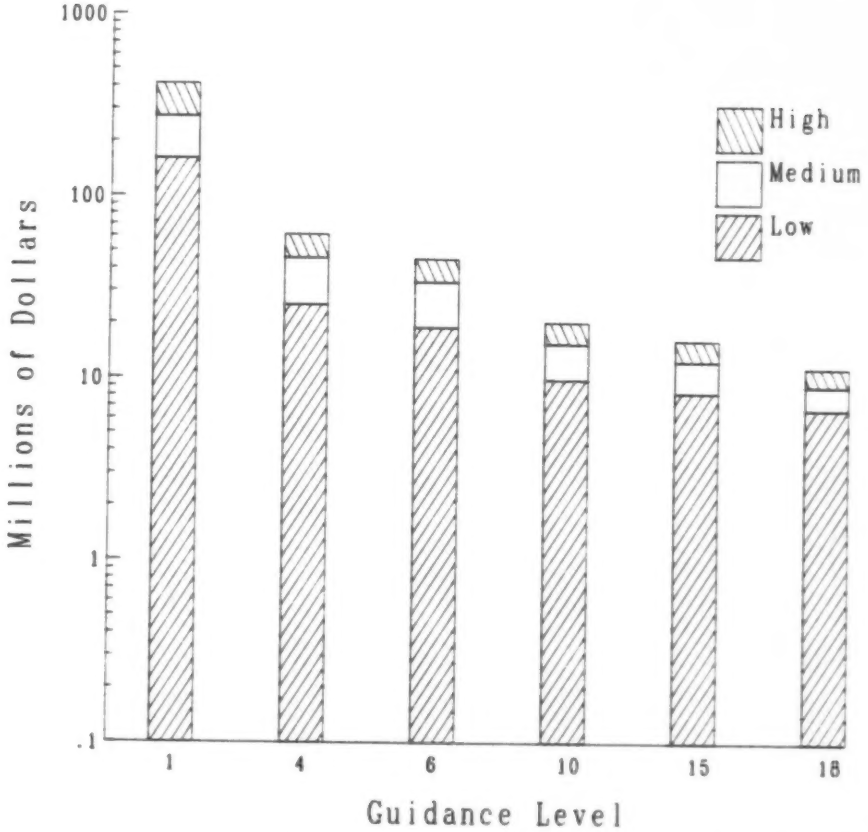

Figure 24. The range of the total present (constant dollar) value of the net after-tax cost to the broadcast industry of guidelines limiting public exposure to radiofrequency radiation from AM, FM, and TV broadcast sources is shown for 6 of 18 guidance levels studied.

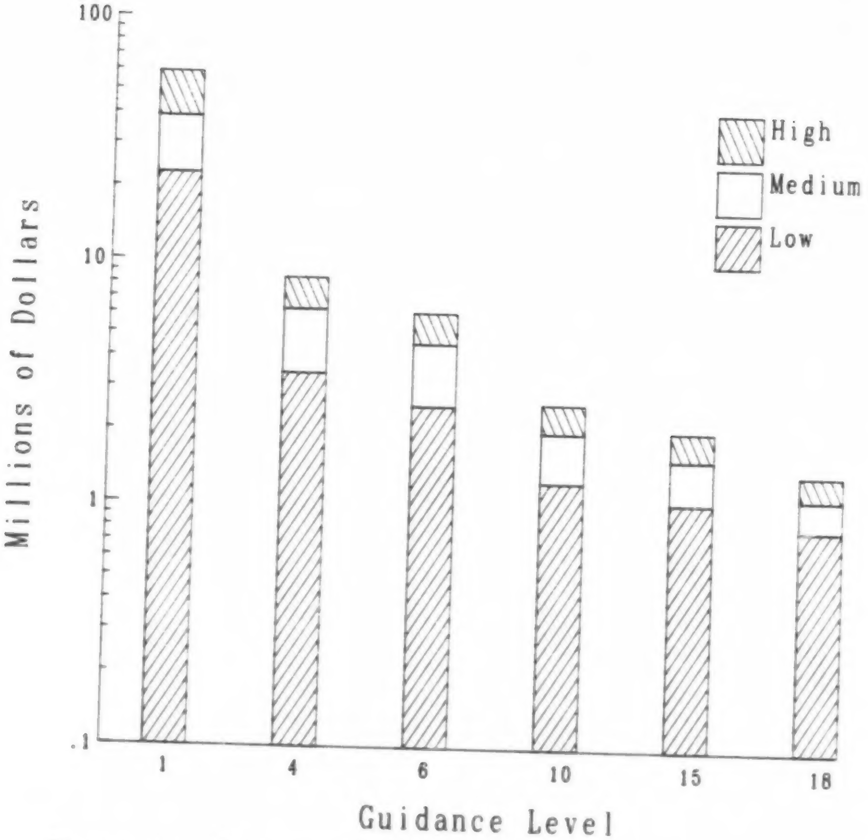

Figure 25. The range of average annual net after tax cash flow (current year dollar) cost to the broadcast industry of guidelines limiting public exposure to radiofrequency radiation from AM, FM, and TV broadcast sources is shown for 6 of 18 guidance levels studied.

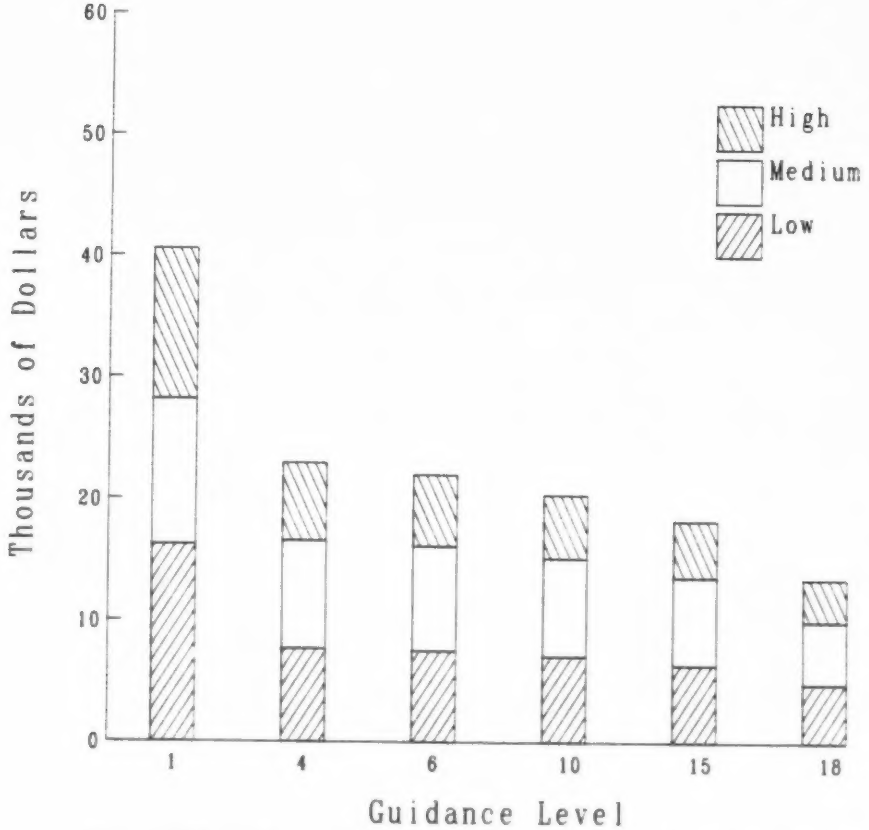

Figure 26. The range of the average (of 5 cohorts) present (constant dollar) value of the net after-tax cost to the average profitable FM radio broadcast station of guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels studied.

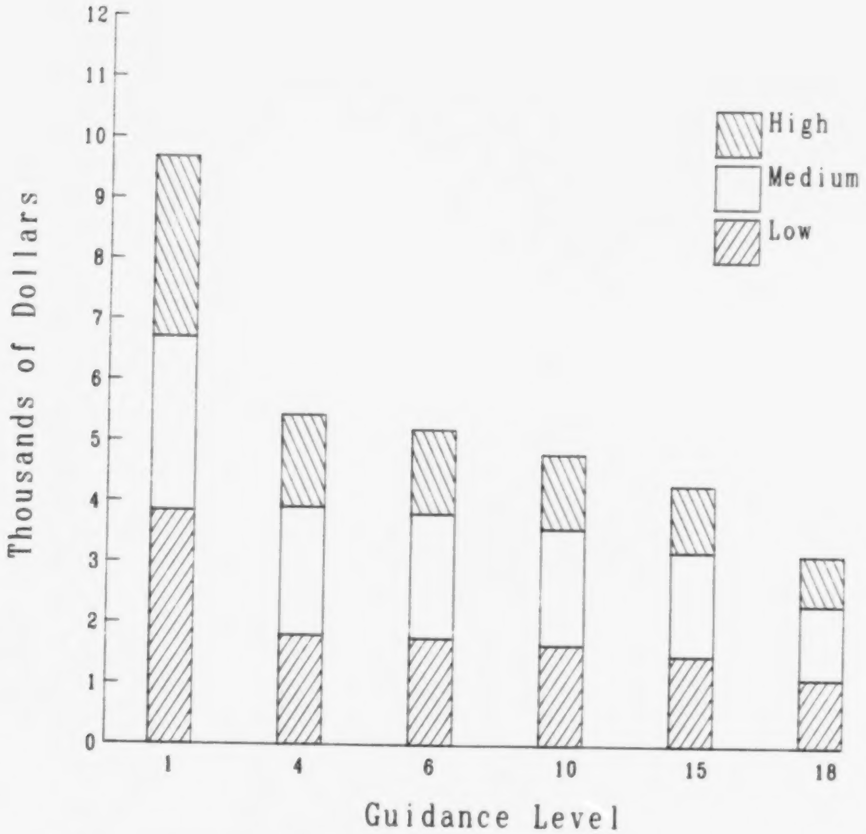

Figure 27. The range of average annual net after-tax cash flow (current year dollar) cost to the average profitable FM radio broadcast station of guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels studied.

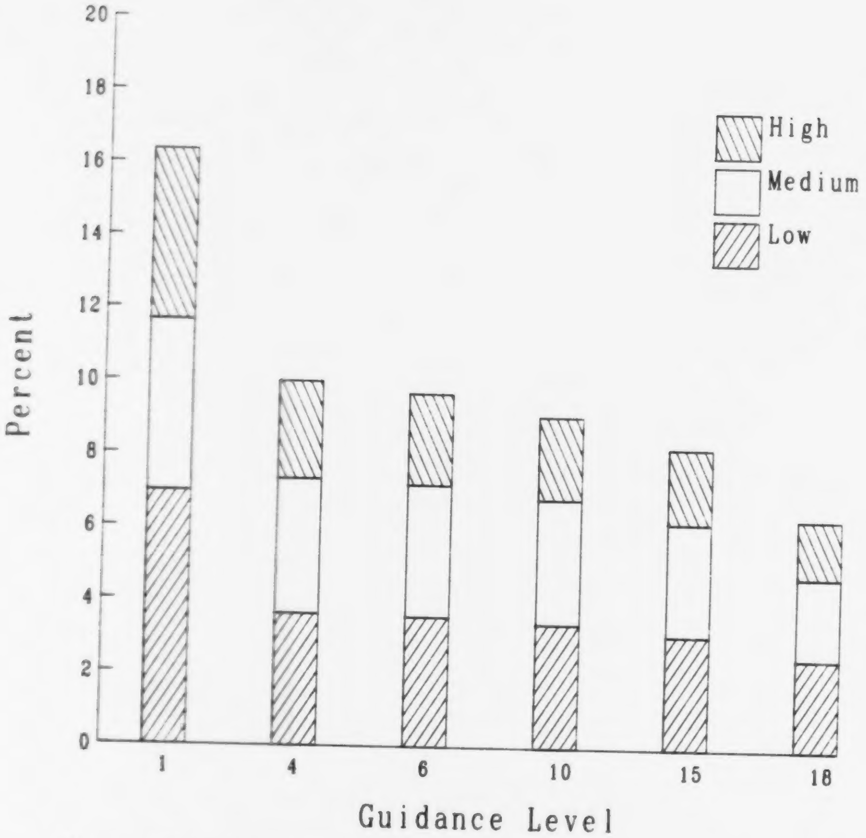

Figure 28. The percentage reduction in the net profit of the average profitable FM radio broadcast station associated with the maximum annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels at 3 cost levels.

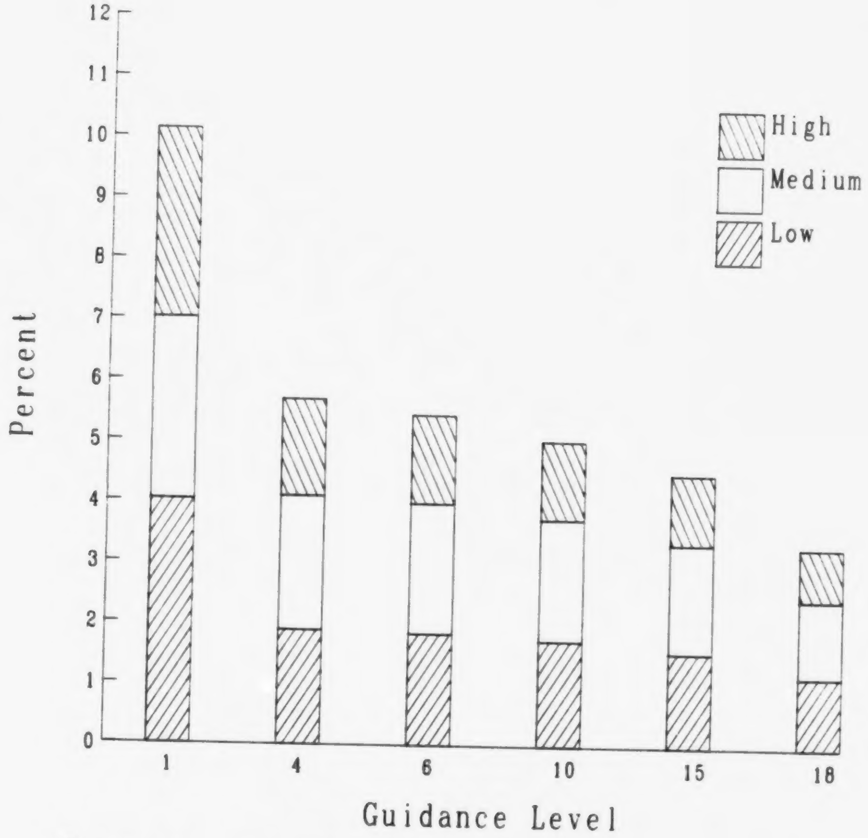

Figure 29. The percentage reduction in the net profit of the average profitable FM radio broadcast station associated with the average annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels at 3 cost levels.

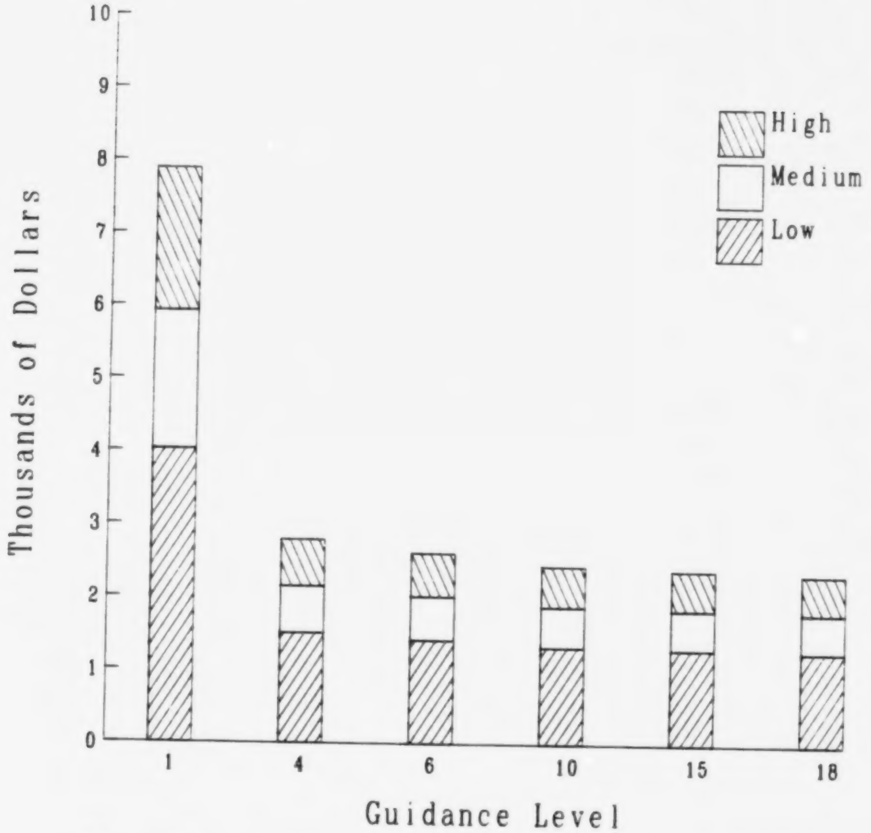

Figure 30. The range of the average (of 5 cohorts) present (constant dollar) value of the net after-tax cost to the average profitable AM radio broadcast station of guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels studied.

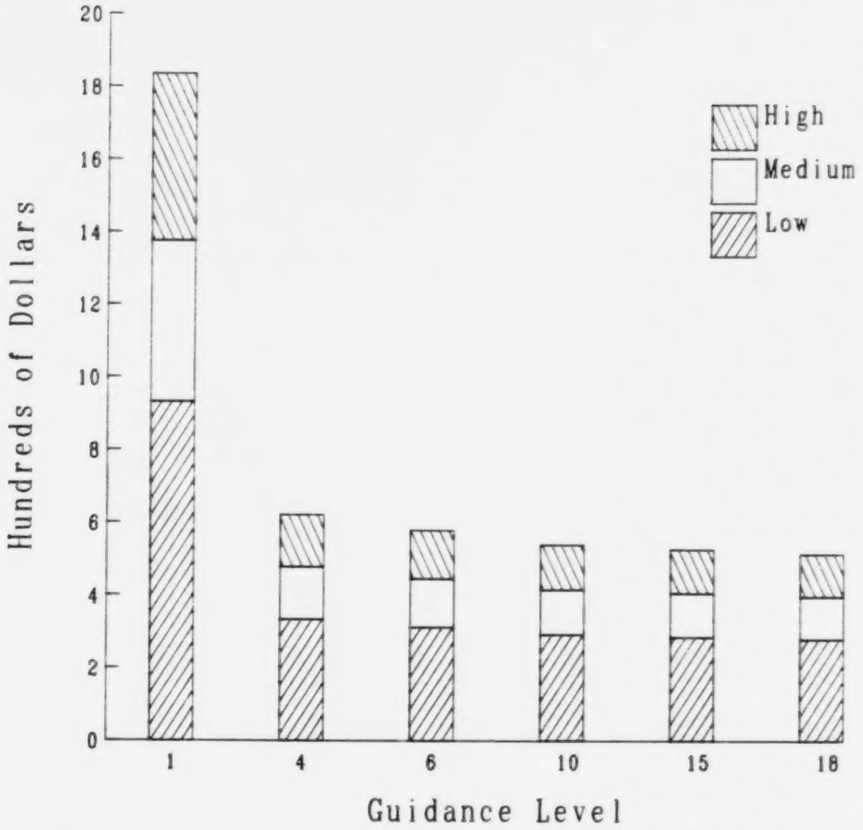

Figure 31. The range of average annual net after-tax cash flow (current year dollar) cost to the average profitable AM radio broadcast station of guidelines limiting public exposure to radio-frequency radiation is shown for 6 of 18 guidance levels studied.

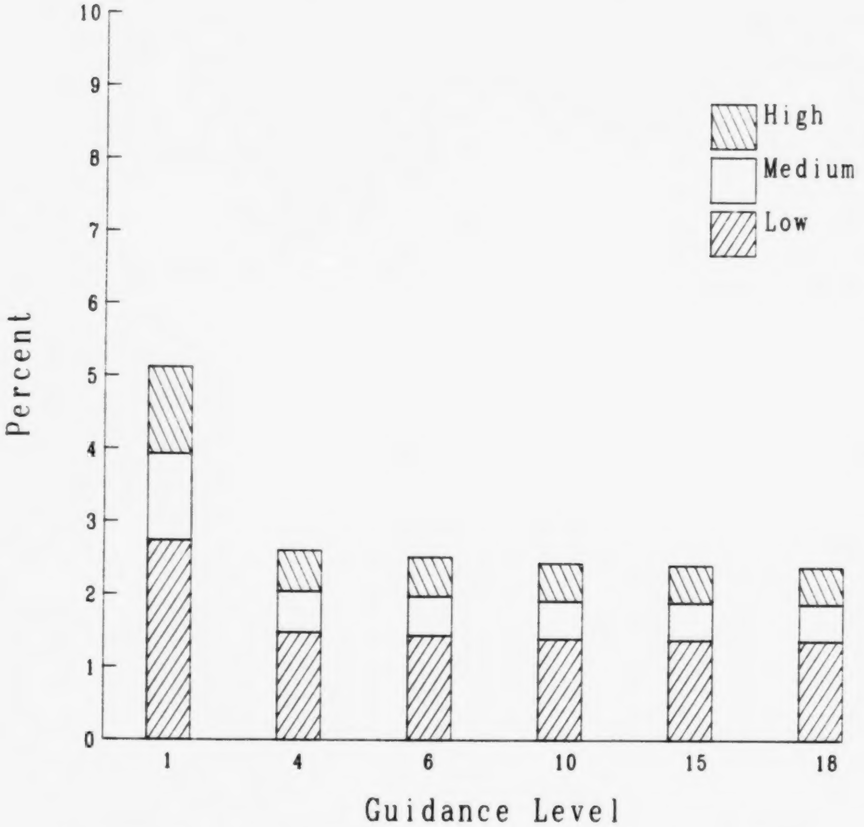

Figure 32. The percentage reduction in the net profit of the average profitable AM radio broadcast station associated with the maximum annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels at 3 cost levels.

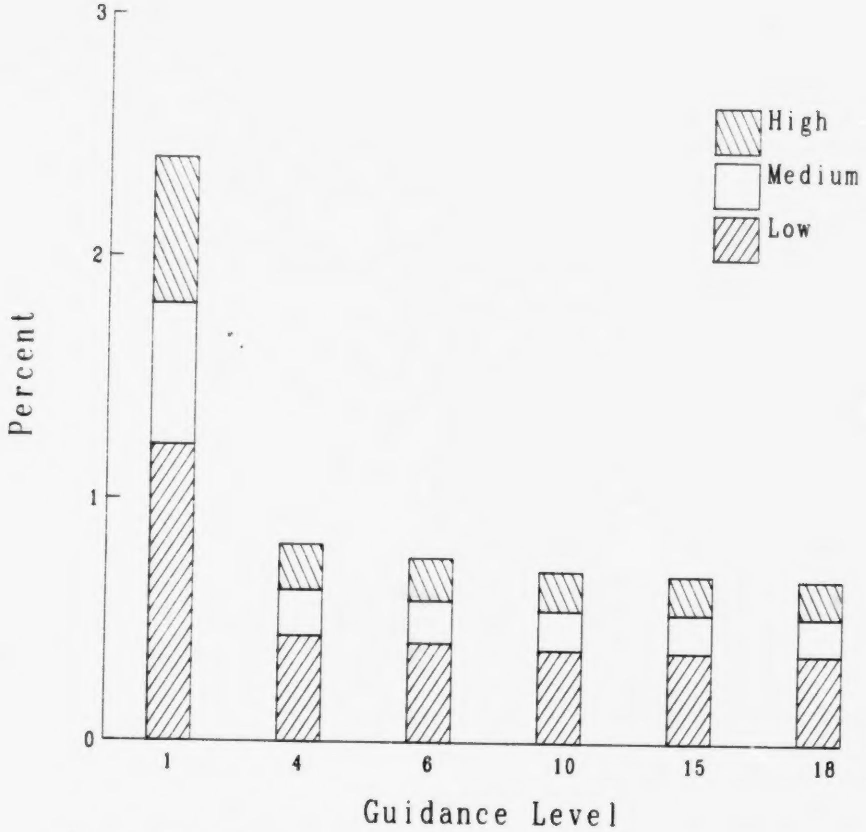

Figure 33. The percentage reduction in the net profit of the average profitable AM radio broadcast station associated with the average annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels at 3 cost levels.

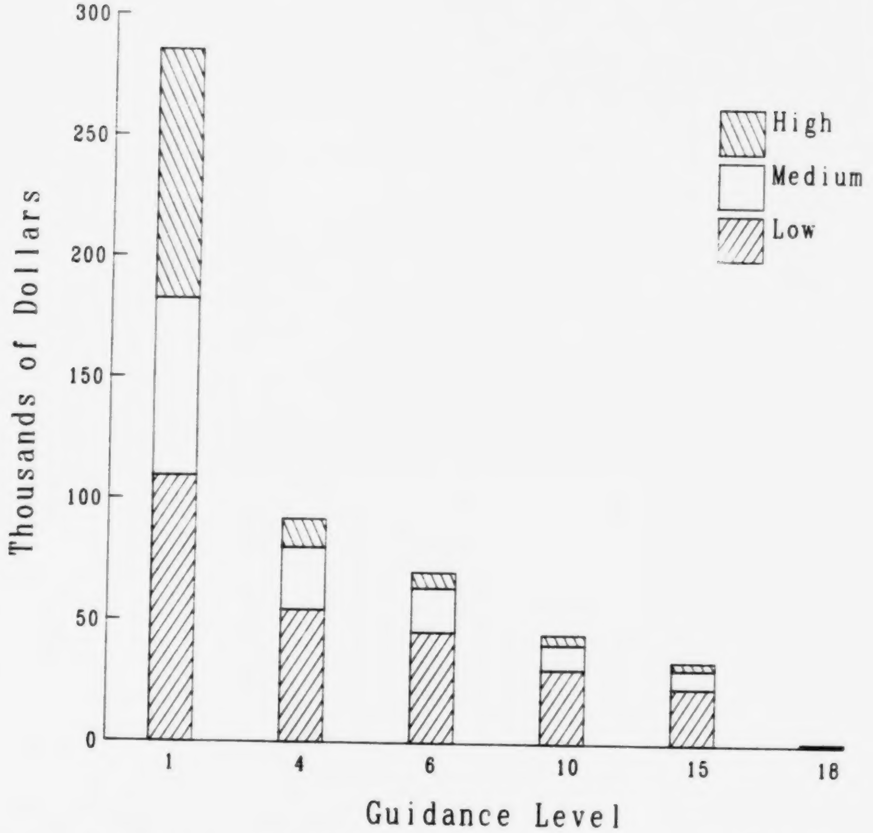

Figure 34. The range of the average (of 5 cohorts) present (constant dollar) value of the net after-tax cost to the average profitable TV broadcast station of guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels studied.

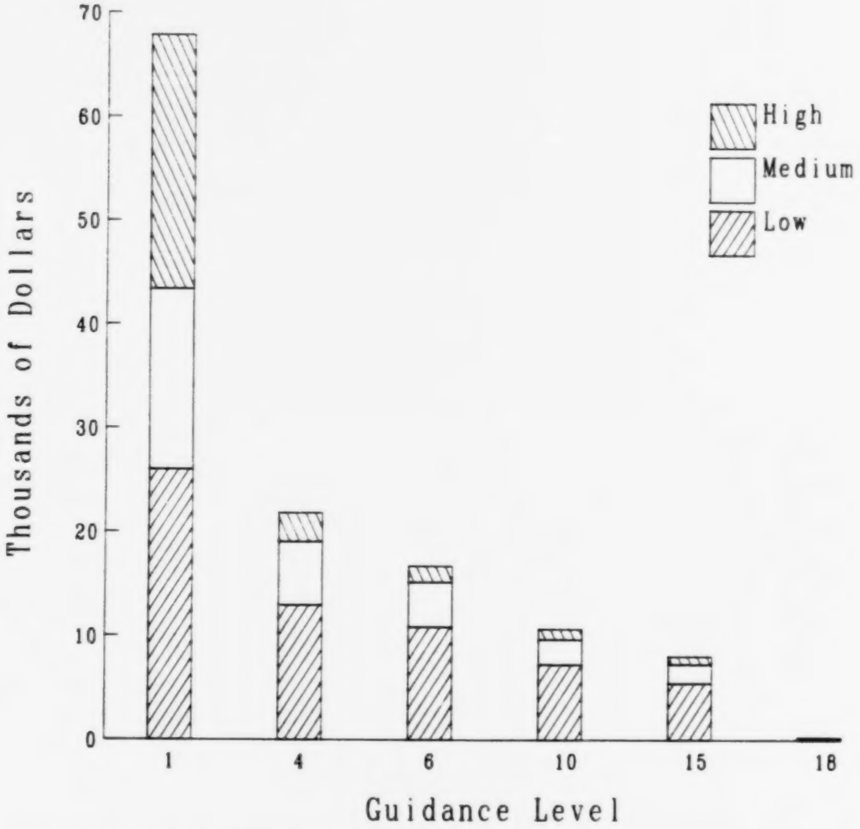

Figure 35. The range of average annual net after-tax cash flow (current year dollar) cost to the average profitable TV broadcast station of guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels studied.

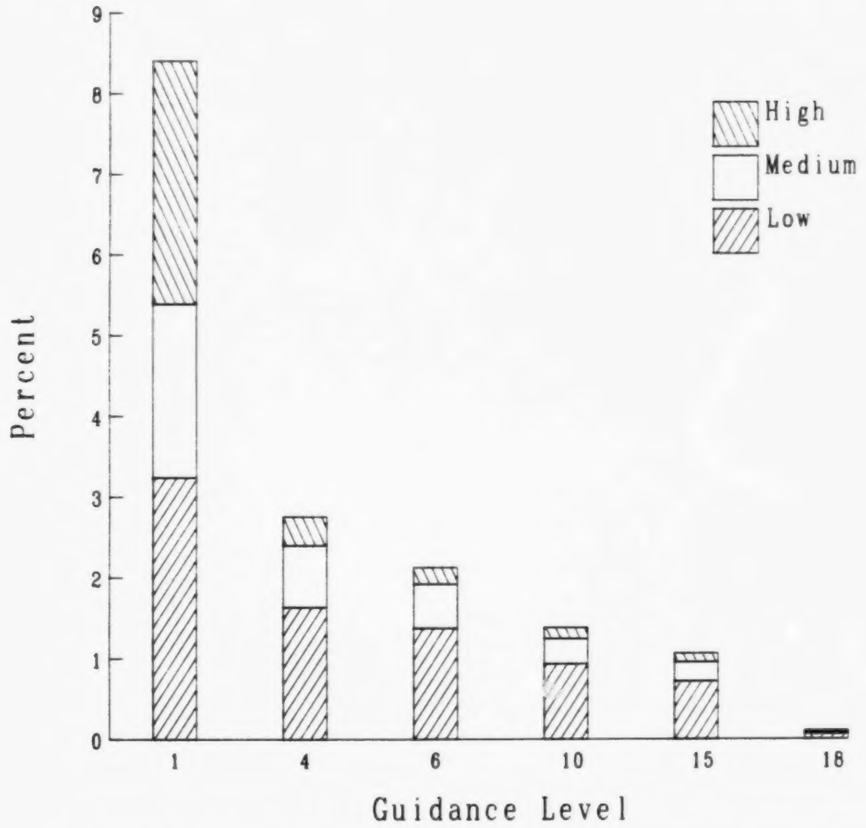

Figure 36. The percentage reduction in the net profit of the average profitable TV broadcast station associated with the maximum annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels studied.

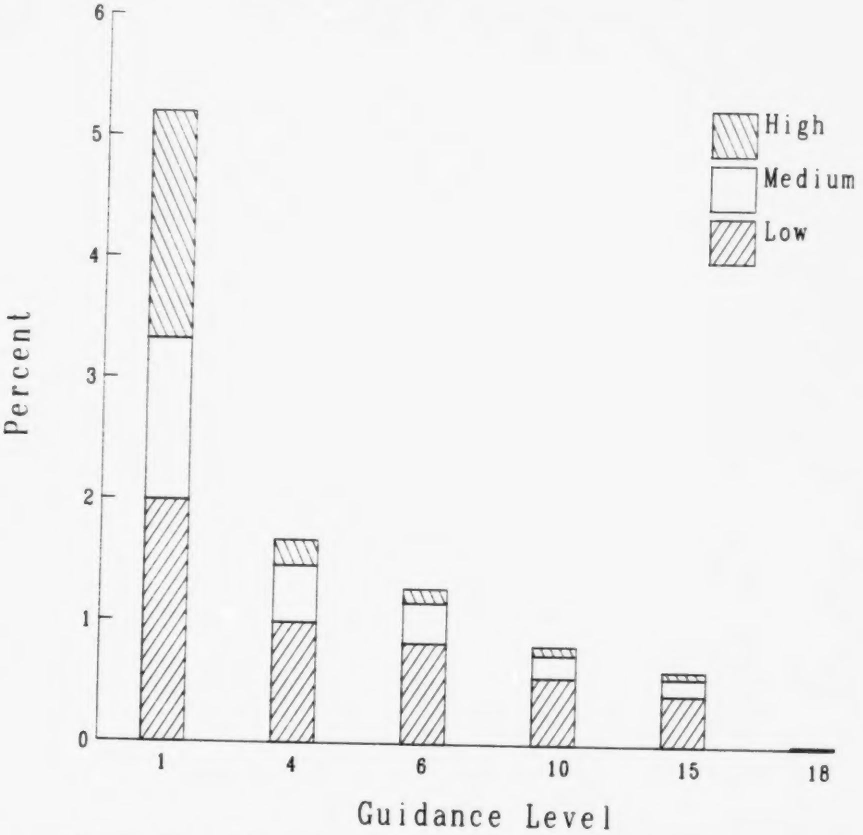

Figure 37. The percentage reduction in the net profit of the average profitable TV broadcast station associated with the average annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels studied.

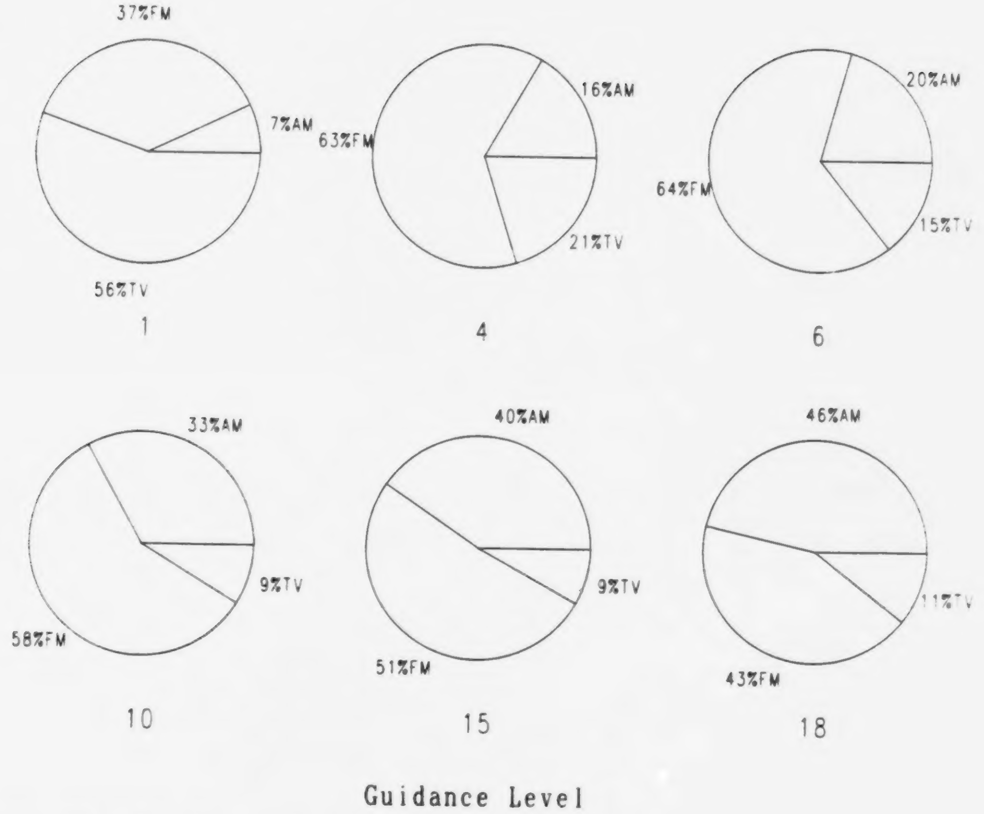

Figure 38. The distribution of the total present (constant dollar) value cost to society-at-large among AM, FM, and TV broadcasters of guidelines limiting public exposure to radiofrequency radiation is shown for 6 of 18 guidance levels studied (medium cost analysis).

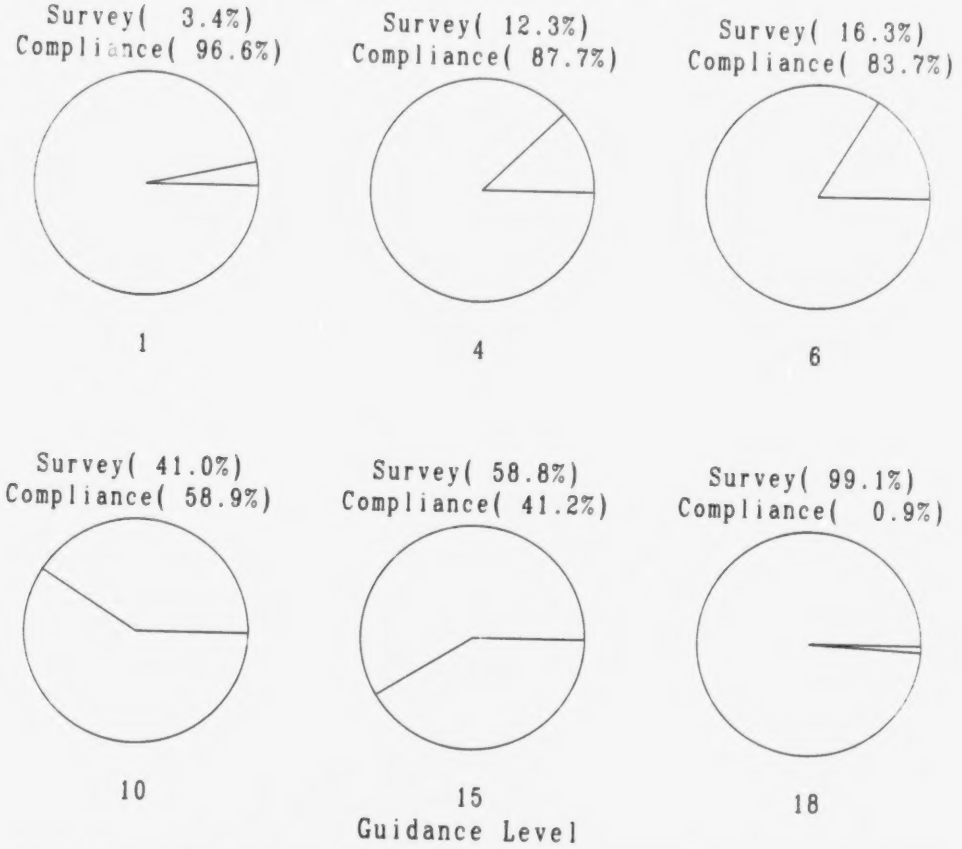

Figure 39. The distribution of the two main cost components for the total gross (undiscounted) cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from FM broadcast sources is shown for 6 of 18 guidance levels studied (medium cost analysis).

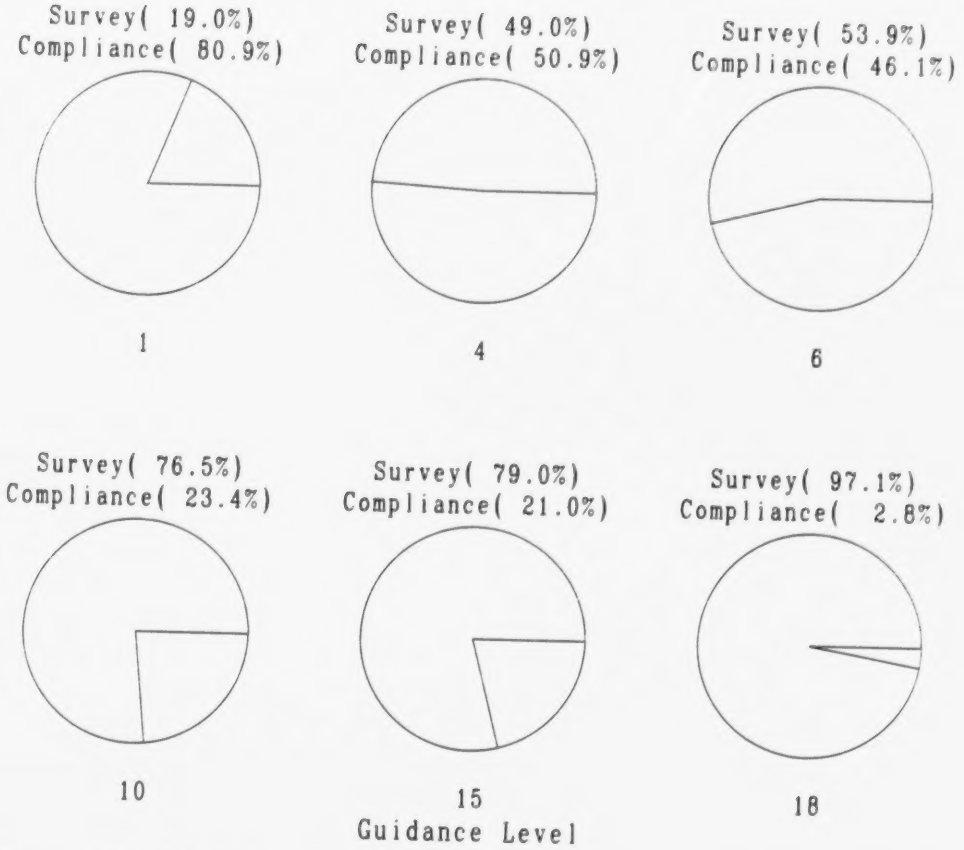

Figure 40. The distribution of the two main cost components for the total gross (undiscounted) cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from AM broadcast sources is shown for 6 of 18 guidance levels studied (medium cost analysis).

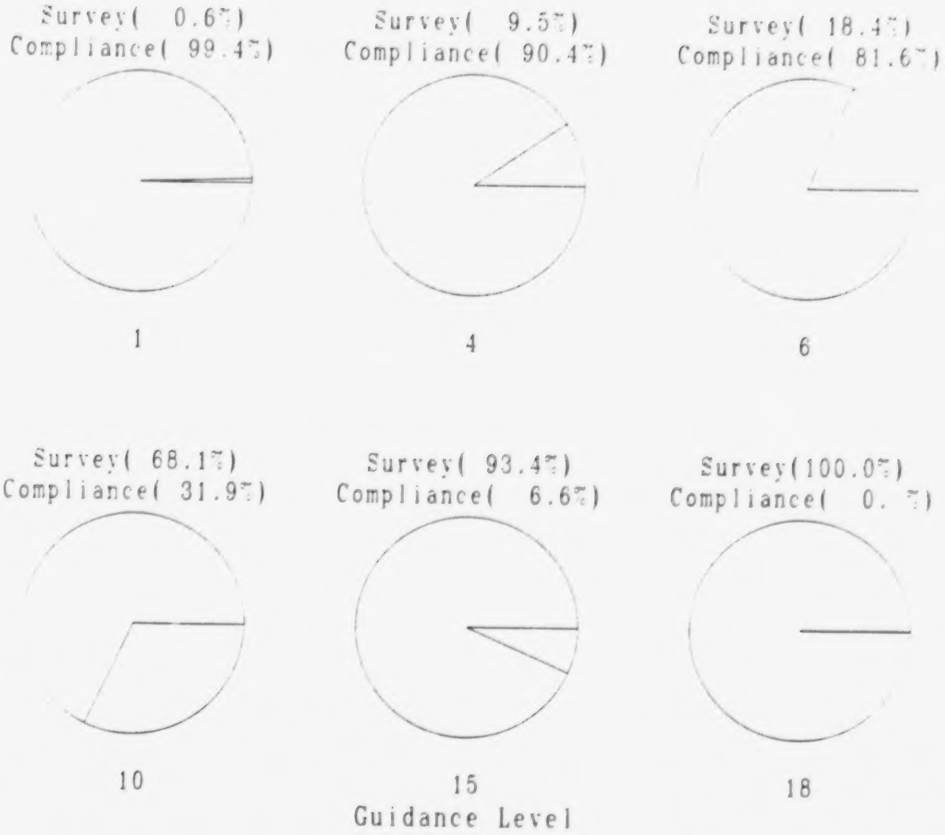

Figure 41. The distribution of the two main cost components for the total gross (undiscounted) cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from TV broadcast sources is shown for 6 of 18 guidance levels studied (medium cost analysis).

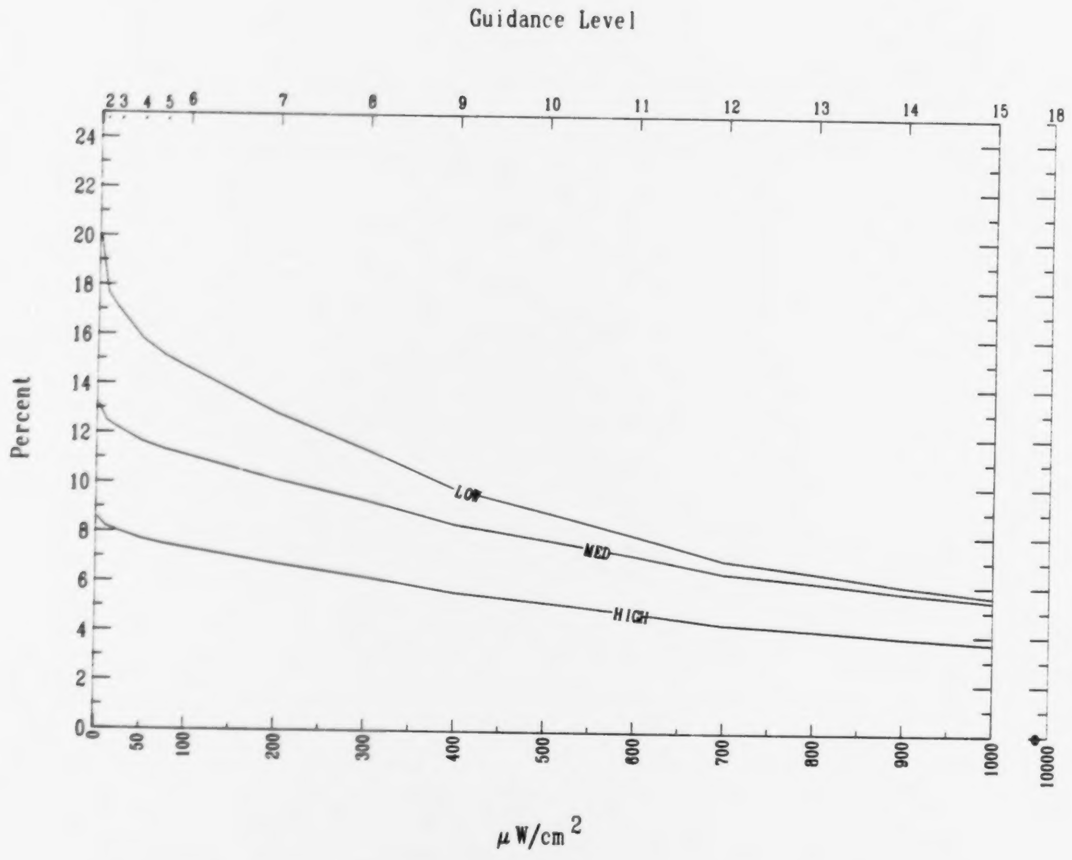

Figure 42. The present (constant dollar) value of the cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from FM radio broadcast sources is reduced by the percentages shown if compliance measure one is permitted.

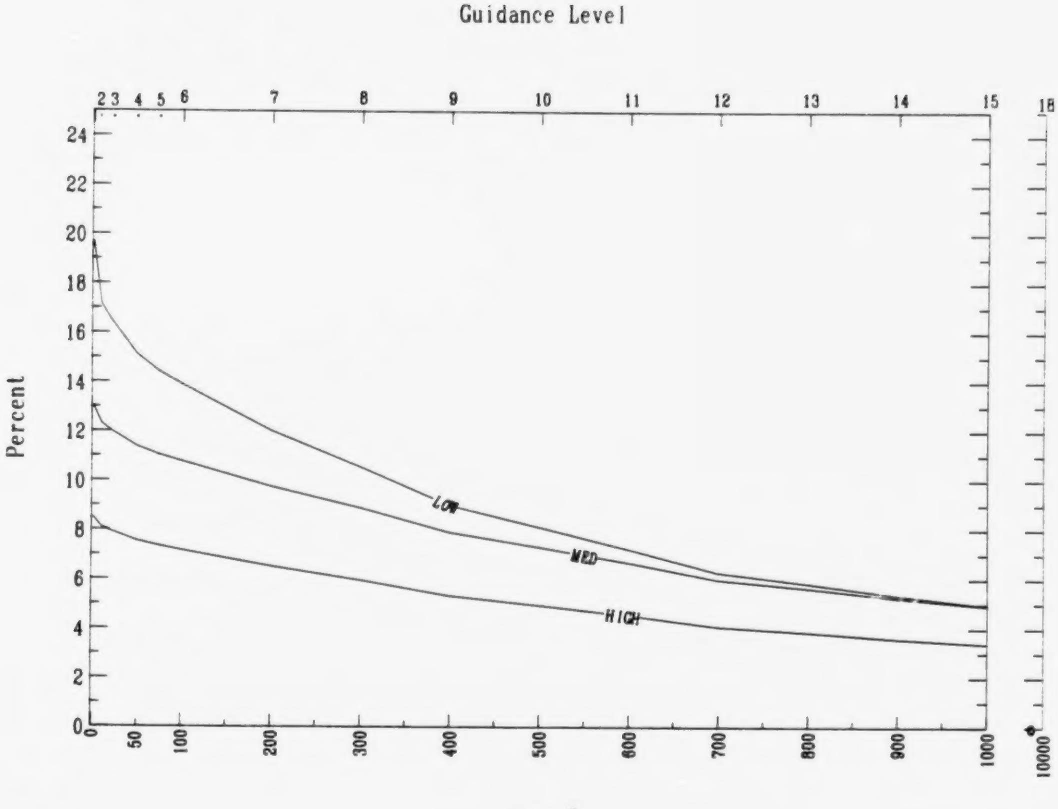

Figure 43. The present (constant dollar) value of the net after-tax cost to the FM broadcast industry of guidelines limiting public exposure to radiofrequency radiation is reduced by the percentages shown if compliance measure one is permitted.

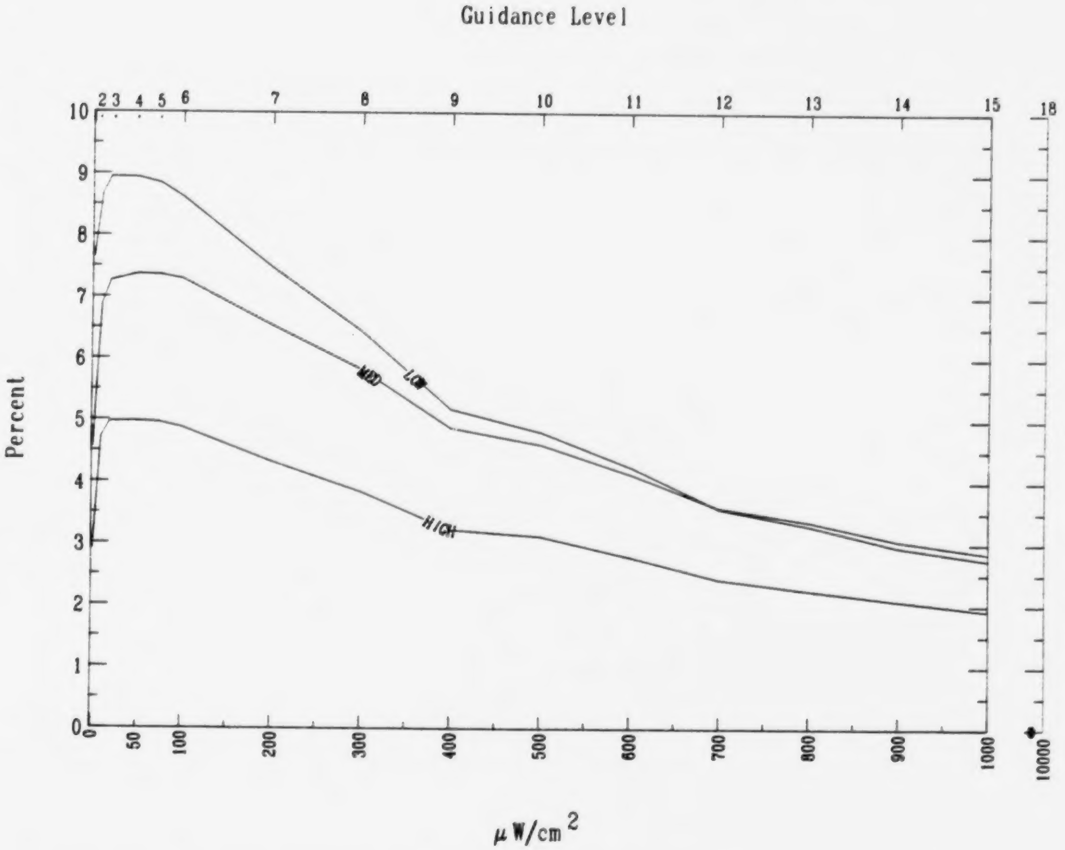

Figure 44. The total present (constant dollar) value of the cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from AM, FM, and TV broadcast sources is reduced by the percentages shown if compliance measure one is permitted for FM stations.

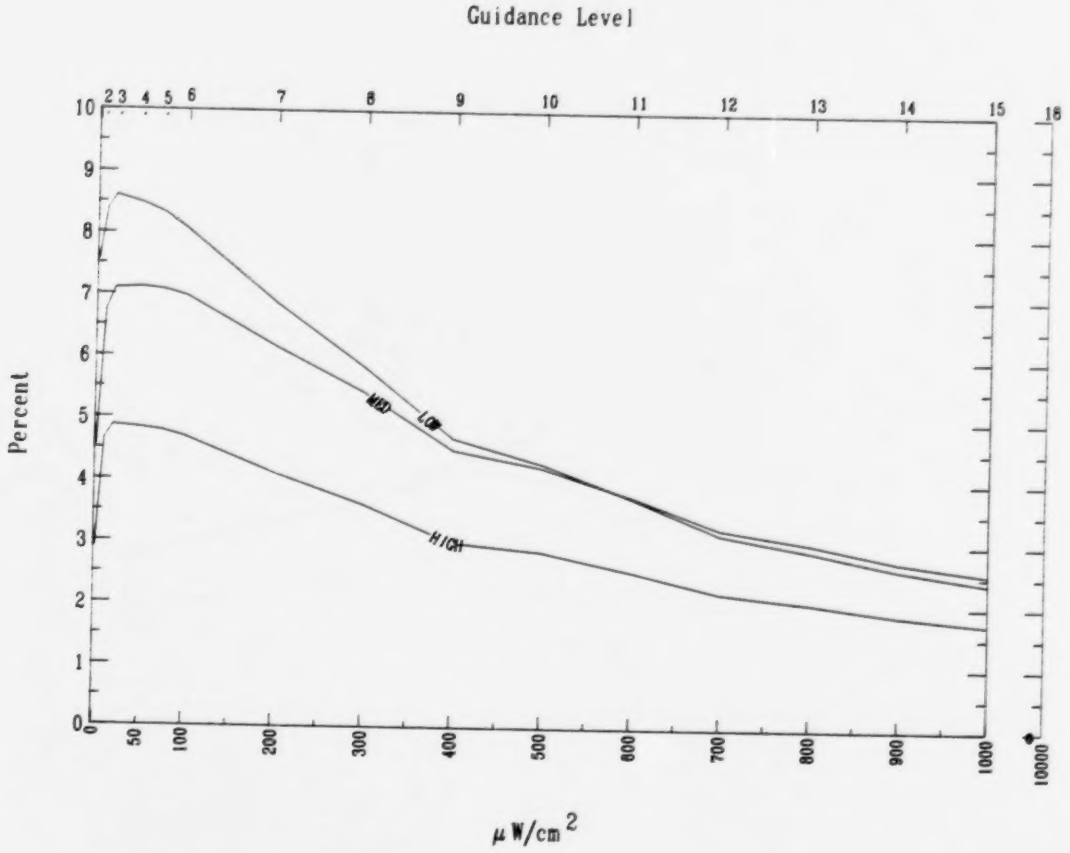

Figure 45. The total present (constant dollar) value of the cost to the AM, FM, and TV broadcast industry of guidelines limiting public exposure to radiofrequency radiation is reduced by the percentages shown if compliance measure one is permitted for FM stations.

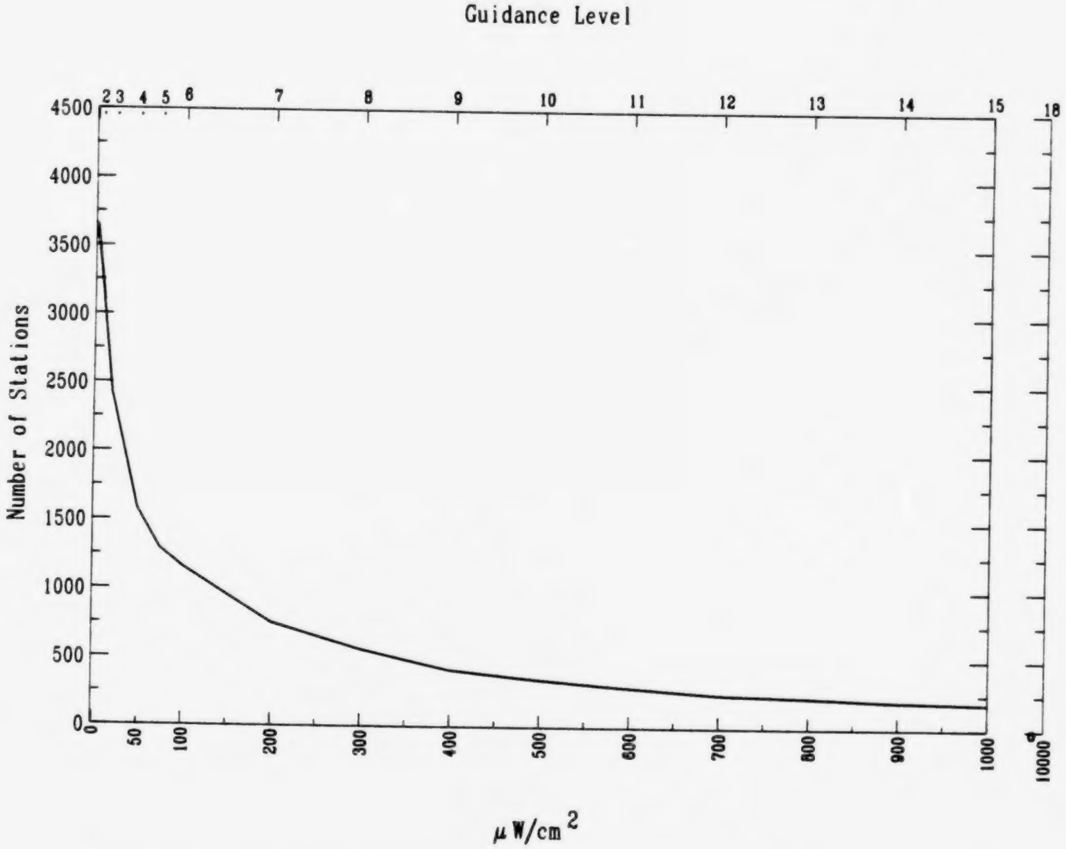

Figure 46. The number of FM radio broadcast stations requiring measures to comply with guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels.

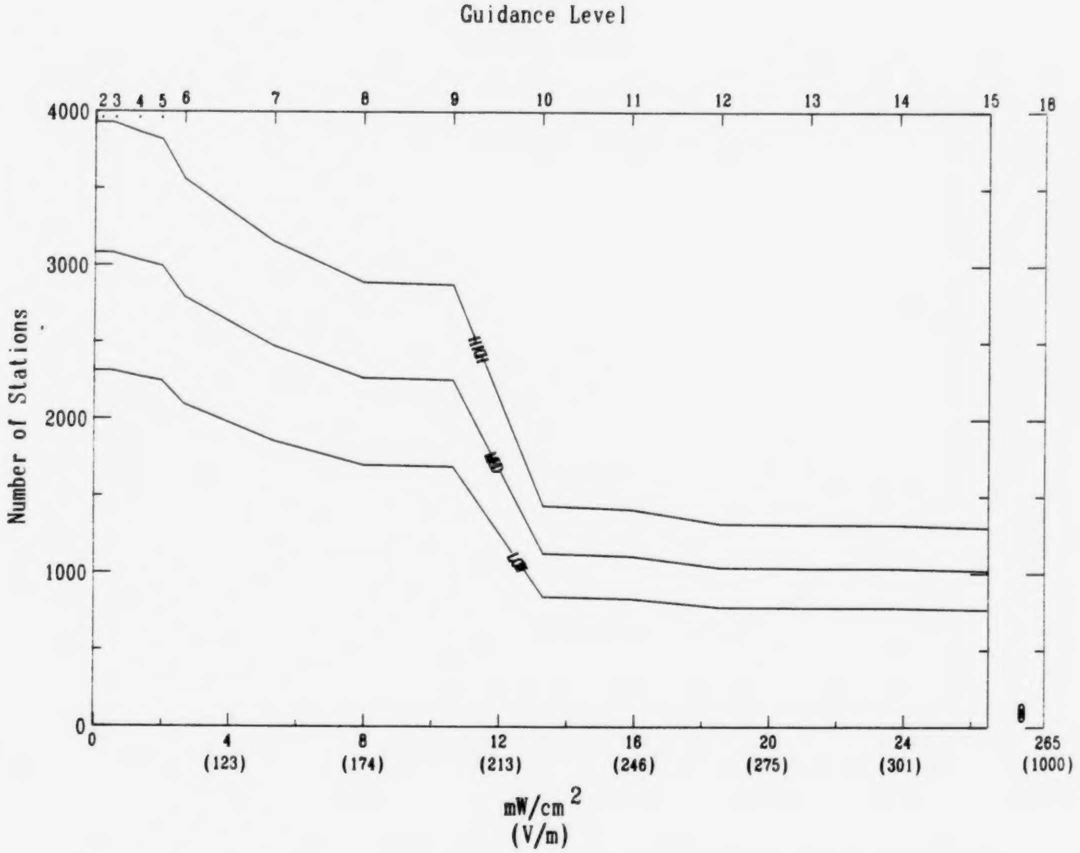

Figure 47. The number of AM radio broadcast stations requiring measures to comply with guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at three cost levels.

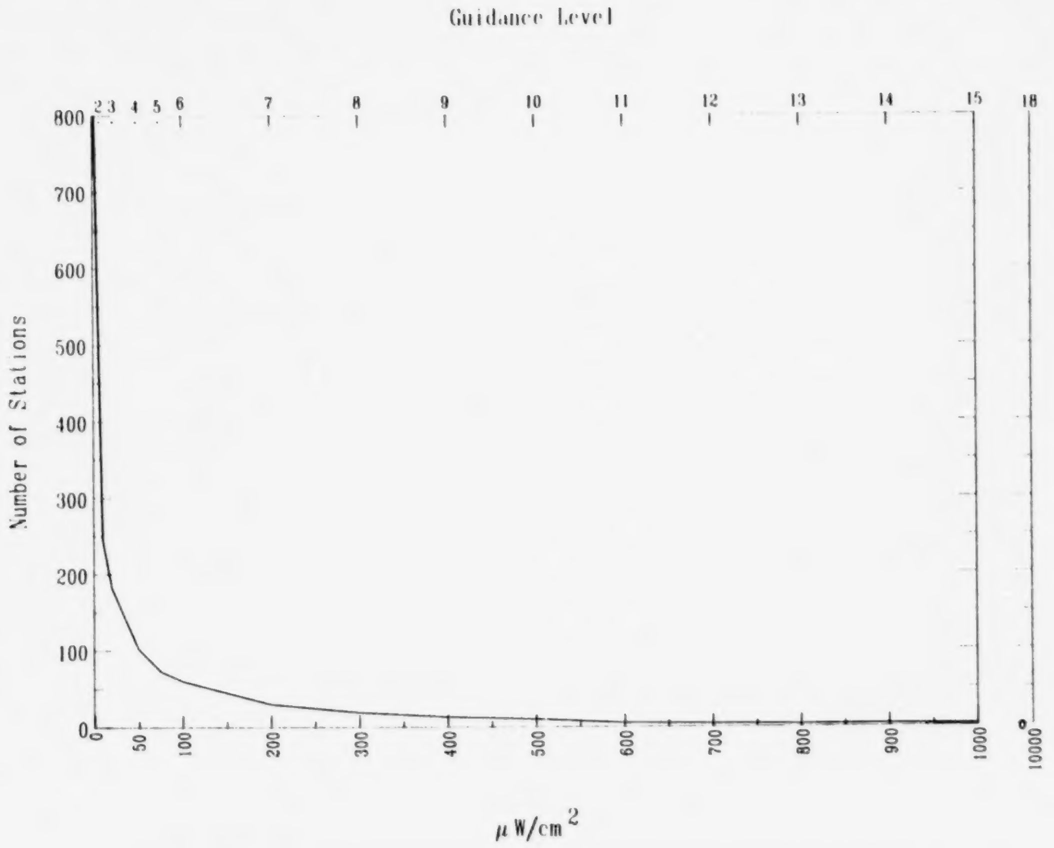

Figure 48. The number of TV broadcast stations requiring measures to comply with guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels.

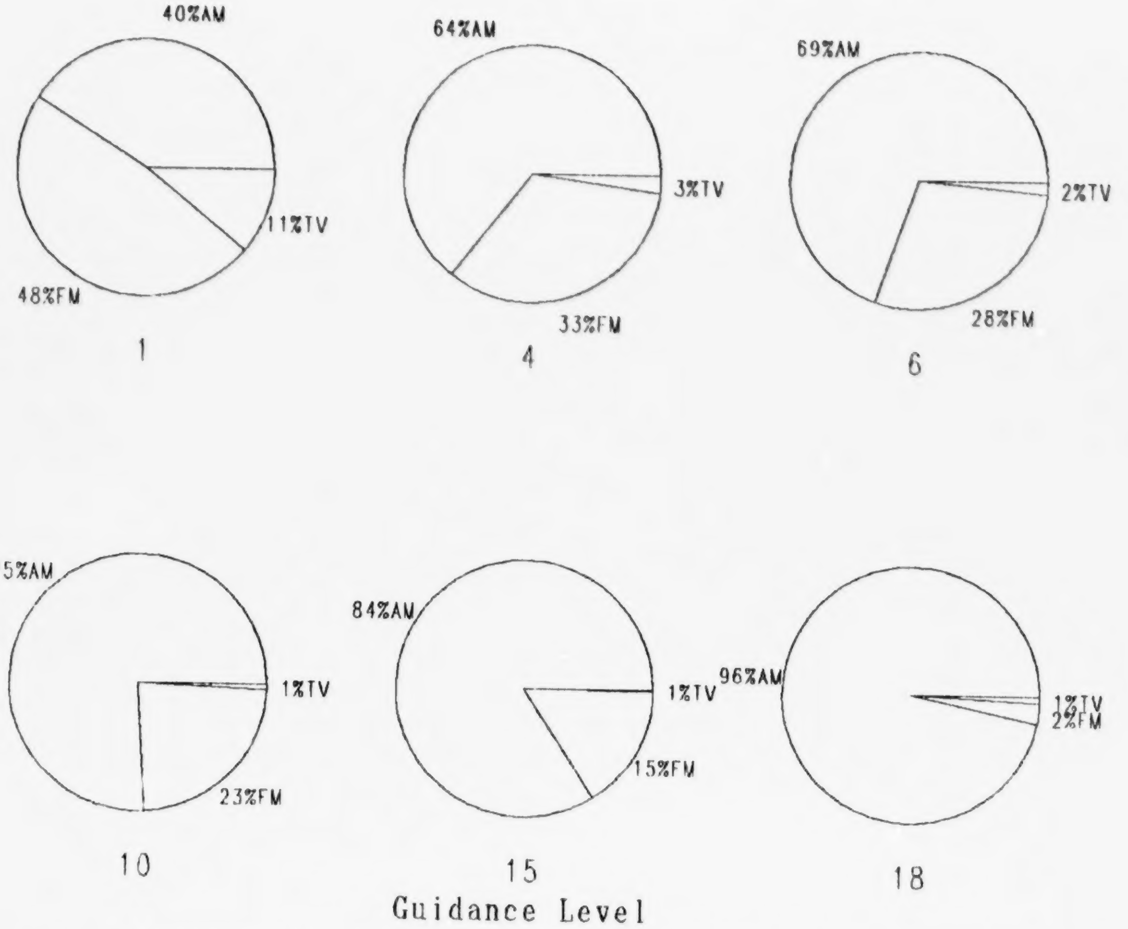

Figure 49. The percentage distribution of AM, FM and TV broadcast stations requiring compliance measures is shown for 6 of 18 guidance levels studied (medium cost analysis).

TABLE 12. AN ESTIMATE OF THE POTENTIAL COST TO THE SOCIETY-AT-LARGE OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM AM, FM, VHF-TV, AND UHF-TV BROADCAST SOURCES IS GIVEN FOR 3 COST LEVELS. THE ANNUAL CASH FLOW (CURRENT YEAR DOLLAR) COST AND THE PRESENT (CONSTANT DOLLAR) VALUE ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT FM STATIONS SELECT ONE OF FIVE COMPLIANCE MEASURES (2 THROUGH 6) AND THAT COMPLIANCE COSTS (ANNUAL CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN MILLIONS OF DOLLARS. MICROWATTS PER SQ. CM IS ABBREVIATED UW/CM^2; VOLTS PER METER, V/M.

	FM			AM			TV			TOTAL		
GUIDANCE LEVEL	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
1.		1. UW/CM^2			10. V/M			1. UW/CM^2				
ANNUAL CASH FLOW COST	30.0	51.5	73.3	5.3	9.7	15.7	45.6	76.0	118.9	80.9	137.2	207.8
PRESENT VALUE	125.1	214.7	305.5	22.2	40.5	65.4	190.2	317.0	495.7	337.5	572.2	866.6
2.		10. UW/CM^2			32. V/M			10. UW/CM^2				
ANNUAL CASH FLOW COST	13.0	28.0	39.4	3.0	5.1	7.8	10.8	16.9	20.5	26.8	49.9	67.7
PRESENT VALUE	54.3	116.6	164.3	12.5	21.1	32.3	45.1	70.5	85.5	111.8	208.2	282.2
3.		20. UW/CM^2			45. V/M			20. UW/CM^2				
ANNUAL CASH FLOW COST	10.4	21.9	30.5	2.7	4.4	6.7	7.0	10.3	12.0	20.0	36.5	49.1
PRESENT VALUE	43.2	91.3	127.1	11.1	18.4	27.8	29.3	42.8	50.1	83.6	152.4	204.9
4.		50. UW/CM^2			71. V/M			50. UW/CM^2				
ANNUAL CASH FLOW COST	6.9	14.3	19.6	2.3	3.8	5.6	3.1	4.5	5.2	12.4	22.6	30.4
PRESENT VALUE	28.8	59.5	81.6	9.8	15.7	23.3	13.0	18.9	21.9	51.6	94.1	126.7
5.		75. UW/CM^2			87. V/M			75. UW/CM^2				
ANNUAL CASH FLOW COST	5.9	12.0	16.4	2.3	3.6	5.3	2.1	3.0	3.4	10.2	18.5	25.0
PRESENT VALUE	24.5	49.9	68.2	9.4	15.0	22.0	8.7	12.3	14.0	42.6	77.2	104.1

TABLE 12. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV			TOTAL		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
6.		100. UW/CM^2			100. V/M			100. UW/CM^2				
ANNUAL CASH FLOW COST	5.3	10.7	14.5	2.2	3.4	5.0	1.7	2.3	2.6	9.2	16.5	22.1
PRESENT VALUE	22.2	44.7	60.4	9.1	14.3	20.9	7.1	9.8	11.0	38.4	68.8	92.3
7.		200. UW/CM^2			141. V/M			200. UW/CM^2				
ANNUAL CASH FLOW COST	3.9	7.5	10.0	2.1	3.2	4.6	0.8	1.1	1.3	6.8	11.8	15.9
PRESENT VALUE	16.2	31.2	41.6	8.6	13.4	19.3	3.5	4.7	5.4	28.3	49.3	66.3
8.		300. UW/CM^2			173. V/M			300. UW/CM^2				
ANNUAL CASH FLOW COST	3.2	5.9	7.8	2.0	3.0	4.2	0.6	0.8	1.0	5.8	9.7	13.0
PRESENT VALUE	13.3	24.7	32.7	8.1	12.4	17.7	2.6	3.4	4.0	24.0	40.6	54.4
9.		400. UW/CM^2			200. V/M			400. UW/CM^2				
ANNUAL CASH FLOW COST	2.7	4.8	6.3	1.9	3.0	4.2	0.5	0.7	0.8	5.1	8.4	11.3
PRESENT VALUE	11.1	19.9	26.2	8.1	12.3	17.5	2.2	2.9	3.5	21.4	35.1	47.1
10.		500. UW/CM^2			224. V/M			500. UW/CM^2				
ANNUAL CASH FLOW COST	2.4	4.3	5.6	1.7	2.4	3.3	0.5	0.6	0.8	4.6	7.3	9.6
PRESENT VALUE	10.2	17.8	23.3	7.0	10.1	13.7	2.0	2.6	3.2	19.1	30.5	40.1

TABLE 12. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV			TOTAL		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
11.		600. UW/CM^2			245. V/M			600. UW/CM^2				
ANNUAL CASH FLOW COST	2.2	3.8	5.0	1.7	2.4	3.2	0.4	0.5	0.6	4.3	6.7	8.9
PRESENT VALUE	9.4	16.0	20.8	6.9	10.0	13.5	1.6	2.1	2.6	17.9	28.1	36.9
12.		700. UW/CM^2			265. V/M			700. UW/CM^2				
ANNUAL CASH FLOW COST	2.1	3.4	4.5	1.6	2.4	3.2	0.4	0.5	0.6	4.1	6.3	8.3
PRESENT VALUE	8.6	14.3	18.6	6.8	9.8	13.3	1.5	2.1	2.5	17.0	26.2	34.4
13.		800. UW/CM^2			282. V/M			800. UW/CM^2				
ANNUAL CASH FLOW COST	2.0	3.3	4.2	1.6	2.3	3.2	0.4	0.5	0.6	4.0	6.1	8.0
PRESENT VALUE	8.3	13.7	17.7	6.8	9.8	13.2	1.5	2.0	2.5	16.6	25.5	33.4
14.		900. UW/CM^2			300. V/M			900. UW/CM^2				
ANNUAL CASH FLOW COST	1.9	3.1	4.0	1.6	2.3	3.2	0.4	0.5	0.6	3.9	5.9	7.8
PRESENT VALUE	8.0	12.9	16.7	6.8	9.8	13.2	1.5	2.0	2.5	16.3	24.7	32.4
15.		1000. UW/CM^2			316. V/M			1000. UW/CM^2				
ANNUAL CASH FLOW COST	1.9	3.0	3.8	1.6	2.3	3.1	0.3	0.5	0.6	3.8	5.8	7.6
PRESENT VALUE	7.8	12.4	16.0	6.8	9.8	13.1	1.4	1.9	2.4	16.0	24.1	31.5

TABLE 12. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV			TOTAL		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
16.	2000. UW/CM^2			447. V/M			2000. UW/CM^2					
ANNUAL CASH FLOW COST	1.6	2.3	2.9	1.6	2.3	3.1	0.3	0.4	0.5	3.5	5.0	6.6
PRESENT VALUE	6.5	9.6	12.2	6.7	9.6	12.8	1.4	1.8	2.3	14.6	21.0	27.3
17.	5000. UW/CM^2			708. V/M			5000. UW/CM^2					
ANNUAL CASH FLOW COST	1.4	1.9	2.4	1.4	2.0	2.5	0.3	0.4	0.5	3.1	4.3	5.4
PRESENT VALUE	5.7	7.8	9.8	6.0	8.2	10.4	1.4	1.8	2.3	13.1	17.8	22.5
18.	10000. UW/CM^2			1000. V/M			10000. UW/CM^2					
ANNUAL CASH FLOW COST	1.3	1.8	2.2	1.4	1.9	2.4	0.3	0.4	0.5	3.1	4.1	5.2
PRESENT VALUE	5.5	7.4	9.2	5.9	7.9	10.0	1.4	1.8	2.3	12.7	17.1	21.5

TABLE 13. AN ESTIMATE OF THE POTENTIAL COST TO THE BROADCAST INDUSTRY OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM AM, FM, VHF-TV, AND UHF-TV BROADCAST SOURCES IS GIVEN FOR 3 COST LEVELS. THE AVERAGE ANNUAL CASH FLOW (CURRENT YEAR DOLLAR) COSTS AND THE PRESENT (CONSTANT DOLLAR) VALUE ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT FM STATIONS SELECT ONE OF FIVE COMPLIANCE MEASURES (2 THROUGH 6) AND THAT COMPLIANCE COSTS (ANNUAL NET CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN MILLIONS OF DOLLARS. MICROWATTS PER SQ. CM IS ABBREVIATED UW/CM^2; VOLTS PER METER, V/M.

	FM			AM			TV			TOTAL		
GUIDANCE LEVEL	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
1.		1. UW/CM^2			10. V/M			1. UW/CM^2				
AVG ANNUAL CASH FLOW	8.5	14.8	21.3	1.5	2.7	4.4	12.8	21.3	33.4	22.8	38.8	59.1
PRESENT VALUE	59.9	103.7	149.1	10.9	19.6	31.5	89.8	149.6	233.9	160.5	273.0	414.6
2.		10. UW/CM^2			32. V/M			10. UW/CM^2				
AVG ANNUAL CASH FLOW	3.7	7.9	11.2	0.8	1.4	2.2	3.0	4.7	5.8	7.5	14.1	19.1
PRESENT VALUE	26.1	56.0	79.2	6.3	10.5	15.9	21.3	33.4	40.5	53.7	99.8	135.6
3.		20. UW/CM^2			45. V/M			20. UW/CM^2				
AVG ANNUAL CASH FLOW	2.9	6.2	8.7	0.7	1.2	1.8	2.0	2.9	3.4	5.6	10.3	13.9
PRESENT VALUE	20.8	43.9	61.2	5.6	9.2	13.8	13.9	20.3	23.8	40.4	73.3	98.8
4.		50. UW/CM^2			71. V/M			50. UW/CM^2				
AVG ANNUAL CASH FLOW	1.9	4.0	5.5	0.6	1.0	1.5	0.9	1.3	1.5	3.4	6.3	8.5
PRESENT VALUE	14.0	28.7	39.4	5.0	7.9	11.6	6.2	9.1	10.5	25.2	45.7	61.5
5.		75. UW/CM^2			87. V/M			75. UW/CM^2				
AVG ANNUAL CASH FLOW	1.6	3.4	4.6	0.6	1.0	1.5	0.6	0.8	0.9	2.8	5.2	7.0
PRESENT VALUE	12.0	24.1	33.0	4.8	7.6	11.0	4.2	5.9	6.8	21.0	37.7	50.8

TABLE 13. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV			TOTAL		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
6.		100. UW/CM^2			100. V/M			100. UW/CM^2				
AVG ANNUAL CASH FLOW	1.5	3.0	4.1	0.6	0.9	1.4	0.5	0.7	0.7	2.6	4.6	6.2
PRESENT VALUE	10.9	21.7	29.2	4.7	7.3	10.5	3.4	4.7	5.4	19.0	33.7	45.1
7.		200. UW/CM^2			141. V/M			200. UW/CM^2				
AVG ANNUAL CASH FLOW	1.1	2.1	2.8	0.6	0.9	1.3	0.2	0.3	0.4	1.9	3.3	4.4
PRESENT VALUE	8.0	15.2	20.3	4.5	6.8	9.8	1.7	2.3	2.7	14.2	24.4	32.8
8.		300. UW/CM^2			173. V/M			300. UW/CM^2				
AVG ANNUAL CASH FLOW	0.9	1.6	2.2	0.5	0.8	1.2	0.2	0.2	0.3	1.6	2.7	3.6
PRESENT VALUE	6.6	12.2	16.0	4.2	6.4	9.0	1.3	1.7	2.1	12.2	20.3	27.1
9.		400. UW/CM^2			200. V/M			400. UW/CM^2				
AVG ANNUAL CASH FLOW	0.7	1.3	1.7	0.5	0.8	1.2	0.1	0.2	0.2	1.4	2.3	3.1
PRESENT VALUE	5.6	9.9	13.0	4.2	6.3	8.9	1.1	1.5	1.8	11.0	17.7	23.7
10.		500. UW/CM^2			224. V/M			500. UW/CM^2				
AVG ANNUAL CASH FLOW	0.7	1.2	1.5	0.5	0.7	0.9	0.1	0.2	0.2	1.3	2.0	2.6
PRESENT VALUE	5.2	8.9	11.6	3.7	5.3	7.1	1.0	1.4	1.7	9.9	15.5	20.4

TABLE 13. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV			TOTAL		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
11.		600. UW/CM-2			245. V/M			600. UW/CM-2				
AVG ANNUAL CASH FLOW	0.6	1.1	1.4	0.5	0.7	0.9	0.1	0.1	0.2	1.2	1.8	2.4
PRESENT VALUE	4.8	8.0	10.4	3.7	5.2	7.0	0.8	1.1	1.4	9.3	14.4	18.9
12.		700. UW/CM-2			265. V/M			700. UW/CM-2				
AVG ANNUAL CASH FLOW	0.6	0.9	1.2	0.4	0.6	0.9	0.1	0.1	0.2	1.1	1.7	2.3
PRESENT VALUE	4.4	7.3	9.4	3.6	5.2	6.9	0.8	1.1	1.3	8.9	13.5	17.7
13.		800. UW/CM-2			282. V/M			800. UW/CM-2				
AVG ANNUAL CASH FLOW	0.5	0.9	1.2	0.4	0.6	0.9	0.1	0.1	0.2	1.1	1.7	2.2
PRESENT VALUE	4.3	6.9	9.0	3.6	5.1	6.9	0.8	1.1	1.3	8.7	13.2	17.2
14.		900. UW/CM-2			300. V/M			900. UW/CM-2				
AVG ANNUAL CASH FLOW	0.5	0.9	1.1	0.4	0.6	0.9	0.1	0.1	0.2	1.1	1.6	2.1
PRESENT VALUE	4.1	6.6	8.5	3.6	5.1	6.9	0.8	1.1	1.3	8.6	12.8	16.7
15.		1000. UW/CM-2			316. V/M			1000. UW/CM-2				
AVG ANNUAL CASH FLOW	0.5	0.8	1.1	0.4	0.6	0.9	0.1	0.1	0.2	1.0	1.6	2.1
PRESENT VALUE	4.0	6.4	8.2	3.6	5.1	6.8	0.8	1.0	1.3	8.4	12.5	16.3

TABLE 13. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV			TOTAL		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
16.		2000. UW/CM-2			447. V/M			2000. UW/CM-2				
AVG ANNUAL CASH FLOW	0.4	0.6	0.8	0.4	0.6	0.8	0.1	0.1	0.1	0.9	1.4	1.8
PRESENT VALUE	3.4	5.0	6.4	3.6	5.1	6.7	0.7	1.0	1.2	7.7	11.1	14.3
17.		5000. UW/CM-2			708. V/M			5000. UW/CM-2				
AVG ANNUAL CASH FLOW	0.4	0.5	0.6	0.4	0.5	0.7	0.1	0.1	0.1	0.8	1.2	1.5
PRESENT VALUE	3.1	4.2	5.3	3.2	4.4	5.6	0.7	1.0	1.2	7.0	9.5	12.1
18.		10000. UW/CM-2			1000. V/M			10000. UW/CM-2				
AVG ANNUAL CASH FLOW	0.4	0.5	0.6	0.4	0.5	0.6	0.1	0.1	0.1	0.8	1.1	1.4
PRESENT VALUE	3.0	4.0	5.0	3.2	4.3	5.4	0.7	1.0	1.2	6.9	9.2	11.6

TABLE 14. AN ESTIMATE OF THE POTENTIAL COST TO THE AVERAGE BROADCAST STATION OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM AM, FM, VHF-TV, AND UHF-TV BROADCAST SOURCES IS GIVEN FOR 3 COST LEVELS. THE AVERAGE ANNUAL CASH FLOW (CURRENT YEAR DOLLAR) COST, THE AVERAGE PRESENT (CONSTANT DOLLAR) VALUE OF THE NET AFTER TAX COST AND THE MAXIMUM AND AVERAGE PERCENT REDUCTION IN NET PROFIT ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT FM STATIONS SELECT ONE OF FIVE COMPLIANCE MEASURES (2 THROUGH 6) AND THAT COMPLIANCE COSTS (ANNUAL NET CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN THOUSANDS OF DOLLARS. MICROWATTS PER SQ. CM IS ABBREVIATED UW/CM^{-2}; VOLTS PER METER, V/M.

	FM			AM			TV		
GUIDANCE LEVEL	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
1.		1. UW/CM^{-2}			10. V/M			1. UW/CM^{-2}	
AVG ANNUAL CASH FLOW	3.8	6.7	9.7	0.9	1.4	1.8	26.0	43.4	67.8
AVERAGE PRESENT VALUE	16.2	28.2	40.6	4.0	5.9	7.9	109.4	182.4	285.3
MAX PROFIT DROP (%)	7.0	11.7	16.4	2.7	3.9	5.1	3.2	5.4	8.4
AVG PROFIT DROP (%)	4.0	7.0	10.1	1.2	1.8	2.4	2.0	3.3	5.2
2.		10. UW/CM^{-2}			32. V/M			10. UW/CM^{-2}	
AVG ANNUAL CASH FLOW	1.9	4.2	6.0	0.5	0.7	0.9	20.1	31.5	38.2
AVERAGE PRESENT VALUE	8.1	17.7	25.1	2.0	2.9	3.9	84.5	132.7	160.8
MAX PROFIT DROP (%)	3.8	7.7	10.7	1.7	2.4	3.1	2.5	3.9	4.8
AVG PROFIT DROP (%)	2.0	4.4	6.2	0.6	0.9	1.1	1.5	2.4	2.9
3.		20. UW/CM^{-2}			45. V/M			20. UW/CM^{-2}	
AVG ANNUAL CASH FLOW	1.9	4.1	5.7	0.4	0.6	0.7	17.3	25.3	29.5
AVERAGE PRESENT VALUE	8.0	17.3	24.3	1.8	2.5	3.3	72.6	106.5	124.4
MAX PROFIT DROP (%)	3.8	7.6	10.5	1.6	2.2	2.9	2.2	3.2	3.7
AVG PROFIT DROP (%)	2.0	4.3	6.0	0.5	0.7	1.0	1.3	1.9	2.3
4.		50. UW/CM^{-2}			71. V/M			50. UW/CM^{-2}	
AVG ANNUAL CASH FLOW	1.8	3.9	5.4	0.3	0.5	0.6	12.9	19.0	21.8
AVERAGE PRESENT VALUE	7.7	16.5	22.9	1.5	2.1	2.8	54.5	80.1	91.8
MAX PROFIT DROP (%)	3.6	7.3	10.0	1.5	2.0	2.6	1.6	2.4	2.8
AVG PROFIT DROP (%)	1.9	4.1	5.7	0.4	0.6	0.8	1.0	1.5	1.7

TABLE 14. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
5.		75. UW/CM^2			87. V/M			75. UW/CM^2	
AVG ANNUAL CASH FLOW	1.8	3.9	5.4	0.3	0.5	0.6	11.4	16.3	18.3
AVERAGE PRESENT VALUE	7.6	16.5	22.8	1.4	2.0	2.6	48.1	68.8	77.1
MAX PROFIT DROP (%)	3.6	7.3	9.9	1.4	2.0	2.5	1.4	2.1	2.3
AVG PROFIT DROP (%)	1.9	4.1	5.6	0.4	0.6	0.8	0.9	1.3	1.4
6.		100. UW/CM^2			100. V/M			100. UW/CM^2	
AVG ANNUAL CASH FLOW	1.8	3.8	5.2	0.3	0.4	0.6	10.8	15.1	16.7
AVERAGE PRESENT VALUE	7.5	16.1	22.0	1.4	2.0	2.6	45.6	63.7	70.3
MAX PROFIT DROP (%)	3.6	7.2	9.7	1.4	2.0	2.5	1.4	1.9	2.1
AVG PROFIT DROP (%)	1.8	4.0	5.4	0.4	0.6	0.8	0.8	1.2	1.3
7.		200. UW/CM^2			141. V/M			200. UW/CM^2	
AVG ANNUAL CASH FLOW	1.7	3.7	5.0	0.3	0.4	0.6	8.0	10.9	12.0
AVERAGE PRESENT VALUE	7.4	15.8	21.4	1.4	2.0	2.6	33.8	45.9	50.6
MAX PROFIT DROP (%)	3.5	7.1	9.5	1.4	2.0	2.5	1.0	1.4	1.5
AVG PROFIT DROP (%)	1.8	3.9	5.3	0.4	0.6	0.7	0.6	0.8	0.9
8.		300. UW/CM^2			173. V/M			300. UW/CM^2	
AVG ANNUAL CASH FLOW	1.7	3.7	4.9	0.3	0.4	0.5	7.3	9.8	10.8
AVERAGE PRESENT VALUE	7.2	15.5	20.9	1.3	1.9	2.4	30.9	41.2	45.5
MAX PROFIT DROP (%)	3.5	7.0	9.3	1.4	1.9	2.4	0.9	1.3	1.4
AVG PROFIT DROP (%)	1.8	3.8	5.2	0.4	0.5	0.7	0.6	0.7	0.8

TABLE 14. (CONTINUED)

GUIDANCE LEVEL	FM LOW	FM MED	FM HIGH	AM LOW	AM MED	AM HIGH	TV LOW	TV MED	TV HIGH
9.		400. UW/CM^2			200. V/M			400. UW/CM^2	
AVG ANNUAL CASH FLOW	1.7	3.6	4.8	0.3	0.4	0.5	7.3	9.7	10.7
AVERAGE PRESENT VALUE	7.1	15.2	20.5	1.3	1.9	2.4	30.7	41.0	45.2
MAX PROFIT DROP (%)	3.4	6.8	9.1	1.4	1.9	2.4	0.9	1.3	1.4
AVG PROFIT DROP (%)	1.7	3.8	5.1	0.4	0.5	0.7	0.6	0.7	0.8
10.		500. UW/CM^2			224. V/M			500. UW/CM^2	
AVG ANNUAL CASH FLOW	1.7	3.6	4.8	0.3	0.4	0.5	7.2	9.7	10.6
AVERAGE PRESENT VALUE	7.1	15.2	20.4	1.3	1.9	2.4	30.5	40.7	44.9
MAX PROFIT DROP (%)	3.4	6.8	9.1	1.4	1.9	2.4	0.9	1.2	1.4
AVG PROFIT DROP (%)	1.7	3.7	5.0	0.4	0.5	0.7	0.6	0.7	0.8
11.		600. UW/CM^2			245. V/M			600. UW/CM^2	
AVG ANNUAL CASH FLOW	1.6	3.5	4.7	0.3	0.4	0.5	5.5	7.3	8.0
AVERAGE PRESENT VALUE	6.9	14.9	20.0	1.3	1.9	2.4	23.1	30.8	34.0
MAX PROFIT DROP (%)	3.3	6.7	8.9	1.4	1.9	2.4	0.7	1.0	1.1
AVG PROFIT DROP (%)	1.7	3.7	4.9	0.4	0.5	0.7	0.4	0.6	0.6
12.		700. UW/CM^2			265. V/M			700. UW/CM^2	
AVG ANNUAL CASH FLOW	1.6	3.4	4.5	0.3	0.4	0.5	5.5	7.3	8.0
AVERAGE PRESENT VALUE	6.7	14.3	19.3	1.3	1.9	2.4	23.1	30.8	34.0
MAX PROFIT DROP (%)	3.3	6.5	8.7	1.4	1.9	2.4	0.7	1.0	1.1
AVG PROFIT DROP (%)	1.6	3.5	4.8	0.4	0.5	0.7	0.4	0.6	0.6

TABLE 14. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
13.		800. UW/CM^2			282. V/M			800. UW/CM^2	
AVG ANNUAL CASH FLOW	1.5	3.3	4.5	0.3	0.4	0.5	5.5	7.3	8.0
AVERAGE PRESENT VALUE	6.6	14.1	18.9	1.3	1.9	2.4	23.1	30.8	34.0
MAX PROFIT DROP (%)	3.2	6.4	8.5	1.4	1.9	2.4	0.7	1.0	1.1
AVG PROFIT DROP (%)	1.6	3.5	4.7	0.4	0.5	0.7	0.4	0.6	0.6
14.		900. UW/CM^2			300. V/M			900. UW/CM^2	
AVG ANNUAL CASH FLOW	1.5	3.3	4.4	0.3	0.4	0.5	5.5	7.3	8.0
AVERAGE PRESENT VALUE	6.5	14.0	18.8	1.3	1.9	2.4	23.1	30.8	34.0
MAX PROFIT DROP (%)	3.2	6.3	8.5	1.4	1.9	2.4	0.7	1.0	1.1
AVG PROFIT DROP (%)	1.6	3.4	4.6	0.4	0.5	0.7	0.4	0.6	0.6
15.		1000. UW/CM^2			316. V/M			1000. UW/CM^2	
AVG ANNUAL CASH FLOW	1.5	3.2	4.3	0.3	0.4	0.5	5.5	7.3	8.0
AVERAGE PRESENT VALUE	6.4	13.6	18.3	1.3	1.9	2.4	23.1	30.8	34.0
MAX PROFIT DROP (%)	3.1	6.2	8.3	1.4	1.9	2.4	0.7	1.0	1.1
AVG PROFIT DROP (%)	1.6	3.4	4.5	0.4	0.5	0.7	0.4	0.6	0.6
16.		2000. UW/CM^2			447. V/M			2000. UW/CM^2	
AVG ANNUAL CASH FLOW	1.4	2.9	3.9	0.3	0.4	0.5	0.1	0.2	0.2
AVERAGE PRESENT VALUE	5.8	12.3	16.5	1.3	1.8	2.4	0.7	0.9	1.1
MAX PROFIT DROP (%)	2.9	5.7	7.6	1.4	1.9	2.4	0.1	0.1	0.1
AVG PROFIT DROP (%)	1.4	3.0	4.1	0.4	0.5	0.7	0.0	0.0	0.0

TABLE 14. (CONTINUED)

	FM			AM			TV		
GUIDANCE LEVEL	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
17.		5000. UW/CM^2			708. V/M			5000. UW/CM^2	
AVG ANNUAL CASH FLOW	1.2	2.4	3.3	0.3	0.4	0.5	0.1	0.2	0.2
AVERAGE PRESENT VALUE	5.0	10.4	14.0	1.3	1.8	2.3	0.7	0.9	1.1
MAX PROFIT DROP (%)	2.6	4.9	6.6	1.4	1.9	2.4	0.1	0.1	0.1
AVG PROFIT DROP (%)	1.2	2.6	3.4	0.4	0.5	0.7	0.0	0.0	0.0
18.		10000. UW/CM^2			1000. V/M			10000. UW/CM^2	
AVG ANNUAL CASH FLOW	1.1	2.3	3.2	0.3	0.4	0.5	0.1	0.2	0.2
AVERAGE PRESENT VALUE	4.8	10.0	13.5	1.3	1.8	2.3	0.7	0.9	1.1
MAX PROFIT DROP (%)	2.5	4.8	6.3	1.4	1.9	2.4	0.1	0.1	0.1
AVG PROFIT DROP (%)	1.2	2.4	3.3	0.4	0.5	0.7	0.0	0.0	0.0

TABLE 15. THE NUMBER OF FM STATIONS REQUIRING MEASURES TO COMPLY WITH GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT STATIONS SELECT ONE OF FIVE COMPLIANCE MEASURES (2 THROUGH 6).

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
1. 1 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	637	1592	129	776	129	3263	
	MFMT	0	14	120	32	192	32	390	3653
MEDIUM COST ANALYSIS	SFMT	0	637	1592	258	517	258	3262	
	MFMT	0	14	120	64	128	64	390	3652
HIGH COST ANALYSIS	SFMT	0	637	1592	388	258	388	3263	
	MFMT	0	14	120	96	64	96	390	3653
2. 10 MICROWATT PER SQ. CM***									
LOW COST ANALYSIS	SFMT	0	1052	1519	25	153	25	2774	
	MFMT	0	59	140	15	91	15	320	3094
MEDIUM COST ANALYSIS	SFMT	0	1052	1519	51	102	51	2775	
	MFMT	0	59	140	30	61	30	320	3095
HIGH COST ANALYSIS	SFMT	0	1052	1519	76	51	76	2774	
	MFMT	0	59	140	45	30	45	319	3093
3. 20 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	1021	1028	12	76	12	2149	
	MFMT	0	65	115	12	75	12	279	2428
MEDIUM COST ANALYSIS	SFMT	0	1021	1028	25	51	25	2150	
	MFMT	0	65	115	25	50	25	280	2430
HIGH COST ANALYSIS	SFMT	0	1021	1028	38	25	38	2150	
	MFMT	0	65	115	37	25	37	279	2429

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER

**FACTORS ASSIGNING STATIONS AMONG FIXES 4,5 AND 6 CREATE ROUNDING ERRORS.

***THE NUMBER OF STATIONS REQUIRING FIX 2 INCREASES AT GUIDANCE LEVEL 2 BECAUSE GUIDANCE LEVEL 1 REQUIRES MORE STATIONS TO ADOPT MORE COMPLEX MITIGATION MEASURES.

TABLE 15. (CONTINUED)

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
4. 50 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	818	500	4	26	4	1352	
ANALYSIS	MFMT	0	83	86	7	42	7	225	1577
MEDIUM COST	SFMT	0	818	500	8	17	8	1351	
ANALYSIS	MFMT	0	83	86	14	28	14	225	1576
HIGH COST	SFMT	0	818	500	13	8	13	1352	
ANALYSIS	MFMT	0	83	86	21	14	21	225	1577
5. 75 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	733	345	3	18	3	1102	
ANALYSIS	MFMT	0	62	86	5	32	5	190	1292
MEDIUM COST	SFMT	0	733	345	6	12	6	1102	
ANALYSIS	MFMT	0	62	86	10	21	10	189	1291
HIGH COST	SFMT	0	733	345	9	6	9	1102	
ANALYSIS	MFMT	0	62	86	16	10	16	190	1292
6. 100 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	686	286	1	10	1	984	
ANALYSIS	MFMT	0	55	104	2	13	2	176	1160
MEDIUM COST	SFMT	0	686	286	3	6	3	984	
ANALYSIS	MFMT	0	55	104	4	8	4	175	1159
HIGH COST	SFMT	0	686	286	5	3	5	985	
ANALYSIS	MFMT	0	55	104	6	4	6	175	1160

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER
**FACTORS ASSIGNING STATIONS AMONG FIXES 4,5 AND 6 CREATE ROUNDING ERRORS.

TABLE 15 . (CONTINUED)

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
7. 200 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	460	166	0	1	0	627	
ANALYSIS	MFMT	0	43	77	0	5	0	125	752
MEDIUM COST	SFMT	0	460	166	0	1	0	627	
ANALYSIS	MFMT	0	43	77	1	3	1	125	752
HIGH COST	SFMT	0	460	166	0	0	0	626	
ANALYSIS	MFMT	0	43	77	2	1	2	125	751
8. 300 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	340	108	0	0	0	448	
ANALYSIS	MFMT	0	43	69	0	0	0	112	560
MEDIUM COST	SFMT	0	340	108	0	0	0	448	
ANALYSIS	MFMT	0	43	69	0	0	0	112	560
HIGH COST	SFMT	0	340	108	0	0	0	448	
ANALYSIS	MFMT	0	43	69	0	0	0	112	560
9. 400 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	233	80	0	0	0	313	
ANALYSIS	MFMT	0	42	58	0	0	0	100	413
MEDIUM COST	SFMT	0	233	80	0	0	0	313	
ANALYSIS	MFMT	0	42	58	0	0	0	100	413
HIGH COST	SFMT	0	233	80	0	0	0	313	
ANALYSIS	MFMT	0	42	58	0	0	0	100	413

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER
**FACTORS ASSIGNING STATIONS AMONG FIXES 4,5 AND 6 CREATE ROUNDING ERRORS.

TABLE 15 . (CONTINUED)

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
10. 500 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	188	64	0	0	0	252	
	MFMT	0	43	50	0	0	0	93	345
MEDIUM COST ANALYSIS	SFMT	0	188	64	0	0	0	252	
	MFMT	0	43	50	0	0	0	93	345
HIGH COST ANALYSIS	SFMT	0	188	64	0	0	0	252	
	MFMT	0	43	50	0	0	0	93	345
11. 600 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	162	48	0	0	0	210	
	MFMT	0	39	42	0	0	0	81	291
MEDIUM COST ANALYSIS	SFMT	0	162	48	0	0	0	210	
	MFMT	0	39	42	0	0	0	81	291
HIGH COST ANALYSIS	SFMT	0	162	48	0	0	0	210	
	MFMT	0	39	42	0	0	0	81	291
12. 700 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	134	42	0	0	0	176	
	MFMT	0	38	31	0	0	0	69	245
MEDIUM COST ANALYSIS	SFMT	0	134	42	0	0	0	176	
	MFMT	0	38	31	0	0	0	69	245
HIGH COST ANALYSIS	SFMT	0	134	42	0	0	0	176	
	MFMT	0	38	31	0	0	0	69	245

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER
**FACTORS ASSIGNING STATIONS AMONG FIXES 4,5 AND 6 CREATE ROUNDING ERRORS.

TABLE 15 . (CONTINUED)

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
13. 800 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	123	35	0	0	0	158	226
	MFMT	0	39	29	0	0	0	68	
MEDIUM COST ANALYSIS	SFMT	0	123	35	0	0	0	158	226
	MFMT	0	39	29	0	0	0	68	
HIGH COST ANALYSIS	SFMT	0	123	35	0	0	0	158	226
	MFMT	0	39	29	0	0	0	68	
14. 900 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	107	31	0	0	0	138	201
	MFMT	0	38	25	0	0	0	63	
MEDIUM COST ANALYSIS	SFMT	0	107	31	0	0	0	138	201
	MFMT	0	38	25	0	0	0	63	
HIGH COST ANALYSIS	SFMT	0	107	31	0	0	0	138	201
	MFMT	0	38	25	0	0	0	63	
15. 1000 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	105	24	0	0	0	129	188
	MFMT	0	39	20	0	0	0	59	
MEDIUM COST ANALYSIS	SFMT	0	105	24	0	0	0	129	188
	MFMT	0	39	20	0	0	0	59	
HIGH COST ANALYSIS	SFMT	0	105	24	0	0	0	129	188
	MFMT	0	39	20	0	0	0	59	

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER
**FACTORS ASSIGNING STATIONS AMONG FIXES 4.5 AND 6 CREATE ROUNDING ERRORS.

TABLE 15. (CONTINUED)

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
16. 2000 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	56	10	0	0	0	66	94
	MFMT	0	22	6	0	0	0	28	
MEDIUM COST ANALYSIS	SFMT	0	56	10	0	0	0	66	94
	MFMT	0	22	6	0	0	0	28	
HIGH COST ANALYSIS	SFMT	0	56	10	0	0	0	66	94
	MFMT	0	22	6	0	0	0	28	
17. 5000 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	16	0	0	0	0	16	24
	MFMT	0	8	0	0	0	0	8	
MEDIUM COST ANALYSIS	SFMT	0	16	0	0	0	0	16	24
	MFMT	0	8	0	0	0	0	8	
HIGH COST ANALYSIS	SFMT	0	16	0	0	0	0	16	24
	MFMT	0	8	0	0	0	0	8	
18. 10000 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	3	0	0	0	0	3	3
	MFMT	0	0	0	0	0	0	0	
MEDIUM COST ANALYSIS	SFMT	0	3	0	0	0	0	3	3
	MFMT	0	0	0	0	0	0	0	
HIGH COST ANALYSIS	SFMT	0	3	0	0	0	0	3	3
	MFMT	0	0	0	0	0	0	0	

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER
**FACTORS ASSIGNING STATIONS AMONG FIXES 4,5 AND 6 CREATE ROUNDING ERRORS.

TABLE 16. THE NUMBER OF AM BROADCAST STATIONS REQUIRING MEASURES TO COMPLY WITH GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 18 SPECIFIED GUIDANCE LEVELS AT THREE COST LEVELS. ACTUAL NUMBER OF STATIONS ESTIMATED TO REQUIRE MITIGATION MEASURE ADJUSTED BY FACTORS GIVEN IN TABLE 5.

GUIDANCE LEVEL		LOW COST	MEDIUM COST	HIGH COST
1	10.00 V/M	2311	3081	3928
2	31.62 V/M	2311	3081	3928
3	44.67 V/M	2310	3030	3927
4	70.79 V/M	2273	3030	3864
5	86.60 V/M	2246	2995	3819
6	100.00 V/M	2095	2793	3562
7	141.25 V/M	1856	2475	3156
8	173.18 V/M	1700	2266	2890
9	200.00 V/M	1690	2253	2873
10	223.87 V/M	844	1125	1435
11	244.91 V/M	831	1107	1412
12	264.55 V/M	776	1034	1319
13	281.84 V/M	773	1031	1314
14	300.00 V/M	773	1030	1314
15	316.23 V/M	762	1015	1295
16	446.68 V/M	710	946	1207
17	707.95 V/M	185	247	315
18	1000.00 V/M	87	116	148

TABLE 17. THE NUMBER OF TV BROADCAST STATIONS AFFECTED BY GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 18 SPECIFIED GUIDANCE LEVELS.

	GUIDANCE LEVEL	
1	1 MICROWATTS PER SQ. CM	819
2	10 MICROWATTS PER SQ. CM	246
3	20 MICROWATTS PER SQ. CM	183
4	50 MICROWATTS PER SQ. CM	102
5	75 MICROWATTS PER SQ. CM	73
6	100 MICROWATTS PER SQ. CM	60
7	200 MICROWATTS PER SQ. CM	30
8	300 MICROWATTS PER SQ. CM	19
9	400 MICROWATTS PER SQ. CM	13
10	500 MICROWATTS PER SQ. CM	10
11	600 MICROWATTS PER SQ. CM	5
12	700 MICROWATTS PER SQ. CM	4
13	800 MICROWATTS PER SQ. CM	3
14	900 MICROWATTS PER SQ. CM	3
15	1000 MICROWATTS PER SQ. CM	2
16	2000 MICROWATTS PER SQ. CM	0
17	5000 MICROWATTS PER SQ. CM	0
18	10000 MICROWATTS PER SQ. CM	0

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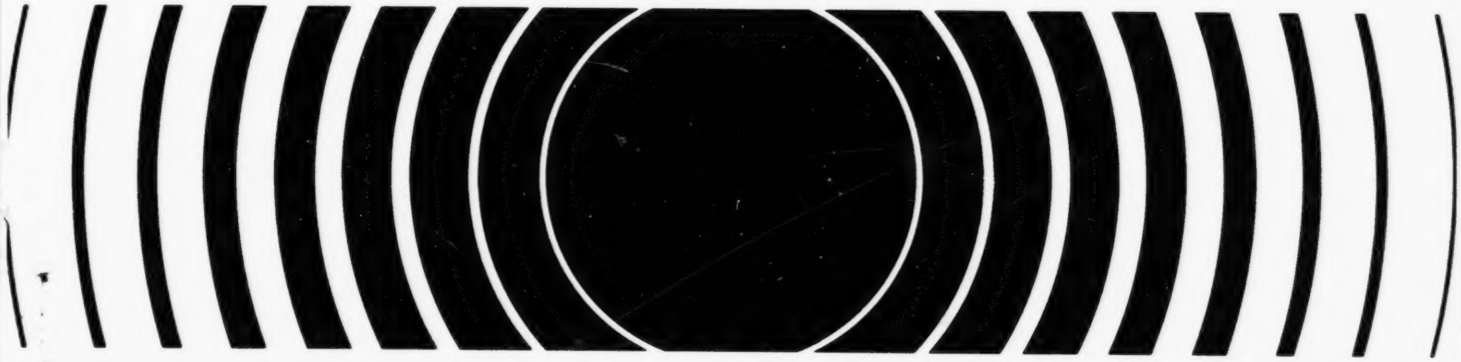
An Estimate of the Potential Costs of Guidelines Limiting Public Exposure to Radiofrequency Radiation from Broadcast Sources

Volume 2: Appendix
Part 1



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Vol. 2, Part 1

AN ESTIMATE OF THE POTENTIAL COSTS OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM BROADCAST SOURCES

Volume 2: Appendix
Part 1

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PREFACE

The purpose of the study reported here is to estimate the potential cost of a federal guidance proposed by the Environmental Protection Agency (EPA) limiting public exposure to radiofrequency (RF) radiation. An estimate of the economic effects of proposed federal actions is mandated by a series of Executive Orders (EOs), the latest of which is EO 12291, Federal Regulation, which is implemented by an Office of Management and Budget guidance on regulatory impact analysis and, in EPA, by a companion guideline for performing regulatory impact analyses. The federal radiofrequency radiation protection guidance has been developed by the EPA under the Federal Radiation Council Authority, 42 U.S.C. 2021(h), transferred to EPA by EO 10831, Reorganization Plan Number 3 of 1970 and by Public Law 86-373.

The EPA has conducted research over the past 12 years on the electromagnetic environment to which the public is exposed and on the propagation of RF by a wide variety of sources, the most significant of which are AM and FM radio, VHF-TV and UHF-TV broadcast stations. The cost study is limited to these significant sources of RF. One of the results of this study, in conjunction with EPA research, is a conceptual development of the type of mitigation measures necessary to effect compliance, as indicated by model results at 18 alternative guidance levels ranging from 1 $\mu W/cm^2$ (FM and TV) or 10 V/m (AM) to 10,000 $\mu W/cm^2$ (FM and TV) or 1,000 V/m (AM). The cost of compliance was estimated using a series of models that present a range (low, medium, and high) of costs to society-at-large, costs to the broadcast industry and costs to and effects on the net income of the average broadcast station. The costs are expressed in a variety of ways, including gross cost, net annual cash flow cost, average annual cash flow cost, and present value.

The report is organized into two volumes, the first a description of the study and a summary of results, the second a series of appendices containing an explanation and sample of the calculations for each of the three segments of the broadcast industry; the appendices also include detailed tabular and graphic descriptions of various cost estimates at each of the 18 guidance levels at the three cost levels. Volume I begins with a preface, executive summary, and abstract, followed by an introduction in which a discussion of the purpose and scope of the study lead to an extensive graphic presentation of conclusions supported by summary tables. Following this is a background section outlining the purpose for and current efforts to regulate RF radiation, public and industry concerns over RF and

its regulation, a brief review of the electromagnetic environment and of health effects research, a profile of commercial broadcast facilities and a discussion of the framework for regulatory (economic) impact analyses.

The next section describes the method of approach used in the cost study. Following this is a section describing the compliance measure concepts developed by the EPA and consultants as part of this study. The remaining section describes the cost models--social, industry, and average firm. All assumptions, including costs, application of compliance measures and financial parameters, are discussed throughout and summarized at the conclusion of Volume I for convenience.

Volume II contains three appendices, one each for AM and FM radio and TV broadcast stations, that present a step-by-step explanation of each of the calculations in the cost models. Those are followed by other appendices that present detailed estimates of the cost of compliance with 18 guidance levels at three cost levels, given in terms of the cost to society-at-large, the cost to industry, and the cost to the average broadcast firm; in addition, the number of stations requiring a compliance measure at each guidance level is given. The average annual cash flow cost and present value estimates are plotted for each of the three analyses (social, industry, and average firm) at three cost levels. These are supported by data in the tables, which also contain other cost analyses not plotted.

This two-volume report is one of a number of documents presenting research that was used to develop the proposed RF guidance and provide analyses for reviewers and decision makers considering it. A presentation of the engineering and health studies is contained in three reports published or in preparation by the U.S. Environmental Protection Agency. A review of over 5000 citations of health risks and biological effects of RF is given in U.S. Environmental Protection Agency, Biological Effects of Radiofrequency Radiation, J. A. Elder and D. F. Cahill Eds., Health Effects Research Laboratory, Research Triangle Park, North Carolina, EPA-600/8-83-026F, September 1984. A study of the engineering aspects of radiofrequency radiation is contained in Gailey, P. C. and R. A. Tell, An Engineering Assessment of the Potential Impact of Federal Radiation Protection Guidance on the AM, FM, and TV Broadcast Services, U.S. Environmental Protection Agency, Washington, D.C. (in press). A third report has been prepared on the radiofrequency environment: Hankin, N. N., The Radiofrequency Radiation Environment; Environmental Exposure Levels and RF-Emitting Sources, U.S. Environmental Protection Agency, Washington, D.C. (in press).

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APPENDIX A
ECONOMIC METHODOLOGY: SAMPLE COMPUTATIONS AND ENGINEERING DATA FOR FM RADIO STATIONS

The object of this appendix is to present a detailed sample calculation of the total social, industry, and average firm cost of complying with guidelines limiting public exposure to radiofrequency radiation. In Volume 1, the cost analysis is presented for eighteen field strength guidance levels at three cost levels. For the sample calculation, guidance level 6 (i.e., 100 $\mu W/cm^2$) at the medium cost level is analyzed. The cost to society-at-large of the 100 $\mu W/cm^2$ standard is expressed in terms of the total gross cost, the annual cash flow cost, and the present value. The cost to industry is expressed in terms of annual net cash flow cost over a period of ten years, the average cost over the 10-year period, and the present value of the 10-year cost stream. The cost to the average firm is presented in terms of the annual net cash flow cost, the average cost, and the average present value for the average profitable station.

REQUIRED DATA AND DEFINITIONS

The cost analyses address six compliance measures (termed fixes) that are used to achieve compliance at each of 18 power density levels. The cost of these six fixes at each of three cost levels is given in Table A-1. Fix 1 is the placement of signs warning the public of over-guidance radiofrequency radiation at very remote antennas, but this measure is not used in the analysis except in a small comparison study described in Volume 1. Fix 2 involves replacement of the antenna with an off-the-shelf model of the same gain or number of elements, but with reduced downward radiation. Because the price of FM antennas varies directly with the number of bays, it is necessary to know how many stations require antennas of what size. Table A-2 lists FM stations for each of the 18 power density levels whose antennas are installed alone on ground-mounted towers by the size of antenna (number of bays or elements in the antenna). Column 1 gives the antenna size; column 2 gives the total number of stations in the EPA data base whose signal exceeds the given power density. It is the sum of columns 3 through 6. Column 3 gives the number of stations distributed by antenna size that would comply with the given power density limit with installation of an off-the-shelf model, Fix 2. Column 4 gives the number of stations by antenna size for which a specially designed half-wavelength antenna would be required to achieve compliance, Fix 3. Column 5 gives the stations that would require a specific type of half-wavelength antenna. These were combined with the stations in Fix 3 for the cost analysis. Column 6 gives the remainder of the stations for

Table A-1. Costs of compliance measures for FM radio broadcast stations.[a]

a. Compliance measure 1. Post area exposed to over-standard levels of RF.

	Cost per station		
	Low	Medium	High
Cost of signs	$2,000	$2,000	$2,000

b. Compliance measure 2. Replace existing FM antenna with new model having smaller grating lobe.

Number of bays	Cost per station		
	Low	Medium	High
1	$ 1,750	$ 4,690	$ 6,650
2	3,500	8,300	11,500
3	5,300	12,200	16,725
4	7,000	16,200	22,300
5	8,800	21,100	27,700
6	11,400	24,300	32,850
7	13,200	28,300	38,350
8	15,000	32,700	44,500
9	16,700	36,900	50,275
10	18,500	41,000	56,050
11	20,200	44,700	60,960
12	22,000	50,000	65,870
13	26,000	54,200	73,060
14	27,900	59,300	80,250
16	31,700	67,700	91,720

c. Compliance measure 3. Replace existing FM antenna with new antenna whose elements are spaced $\lambda/2$ apart.

Number of bays	Cost per station		
	Low	Medium	High
1	$ 1,750	$ 4,690	$ 6,650
2	5,950	14,110	19,550
3	9,540	21,960	30,105
4	13,125	30,375	41,813
5	16,500	39,550	51,950
6	21,375	45,575	61,600
7	24,750	53,075	71,900
8	28,125	61,325	83,450
9	31,325	69,200	94,275
10	34,700	76,875	105,100
11	37,875	83,825	114,300
12	41,250	93,750	123,500
13	48,750	101,625	137,000
14	52,325	111,200	150,475
16	59,450	126,950	171,975

Table A-1. (continued)

d. Compliance measure 4. Lease space for an FM radio broadcast antenna on another, existing tower, presented as the present value (PV) discounted at 10% over 50 years.

	Cost per station		
	Low	Medium	High
Equipment	$17,000	$23,000	$27,000
Lease (PV)	29,750	59,500	89,250
Total	$46,750	$82,500	$116,250

e. Compliance measure 5. Build taller tower on same site as existing tower.

	Cost per station		
Height (<) of new tower (ft)	Low	Medium	High
50	$14,100	$24,500	$ 32,800
75	15,700	26,800	35,900
100	17,300	29,200	39,000
125	19,600	32,600	43,500
150	21,900	36,000	48,000
175	24,100	39,200	52,300
200	26,500	42,800	57,000
250	30,500	48,700	64,800
300	36,100	56,900	75,700
350	46,700	72,600	96,500
400	54,000	83,400	110,700
500	81,800	105,900	130,000

f. Compliance measure 6. Build new tower on new site.

	Cost per station		
Height (<) of new tower (ft)	Low	Medium	High
100	$60,000	$117,500	$175,000
150	62,500	120,750	179,000
200	65,000	124,500	184,000
250	67,500	128,250	189,000
300	75,000	140,000	205,000
350	80,000	151,000	222,000
400	80,000	151,000	222,000
500	95,000	180,000	265,000

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[a] Derived from Table 9, Volume 1.

TABLE A-2. AN ANALYSIS OF THE REQUIREMENTS FOR COMPLIANCE WITH GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM SINGLE, GROUND-MOUNTED FM RADIO STATIONS IS GIVEN FOR 18 POWER DENSITY LEVELS. SOURCE: EPA ORP, LAS VEGAS, NV.

1 MICROWATT PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA *	BETTER 1/2 WAVE ANTENNA *	UNFIXABLE **
1	66	25	0	0	41
2	295	113	32	27	123
3	628	229	197	69	133
4	515	132	223	42	118
5	162	19	37	14	92
6	369	20	111	43	195
7	92	15	47	5	25
8	176	11	80	23	62
9	14	0	10	1	3
10	221	0	76	59	86
11	20	0	12	5	3
12	311	2	222	48	39
13	3	1	2	0	0
14	31	0	28	1	2
16	5	1	4	0	0
TOTALS	2908	568	1081	337	922
10 MICROWATTS PER SQ. CM					
1	41	12	14	3	12
2	223	76	118	5	24
3	513	369	122	1	21
4	436	267	148	1	20
5	142	28	83	4	27
6	341	56	241	1	43
7	82	39	36	0	7
8	160	30	120	0	10
9	14	1	11	0	2
10	204	9	180	2	13
11	20	1	19	0	0
12	270	35	230	2	3
13	3	2	1	0	0
14	21	10	11	0	0
16	2	2	0	0	0
TOTALS	2472	937	1334	19	182

*Combined for Fix 3.

**Fixes 4, 5, 6 used.

TABLE A-2. CONTINUED

20 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	29	13	9	1	6
2	146	62	72	2	10
3	318	241	64	3	10
4	311	218	79	3	11
5	123	36	66	3	18
6	300	93	181	6	20
7	63	34	26	0	3
8	141	39	95	0	7
9	13	4	7	1	1
10	192	43	144	2	3
11	20	9	11	0	0
12	239	103	134	0	2
13	2	2	0	0	0
14	20	13	7	0	0
16	0	0	0	0	0
TOTALS	1917	910	895	21	91
50 MICROWATTS PER SQ. CM					
1	11	5	1	2	3
2	69	33	35	0	1
3	122	82	32	2	6
4	153	106	41	2	4
5	90	36	44	2	8
6	227	126	93	1	7
7	41	25	16	0	0
8	105	61	42	1	1
9	7	4	3	0	0
10	163	85	77	0	1
11	18	15	3	0	0
12	187	141	46	0	0
13	1	1	0	0	0
14	12	9	3	0	0
16	0	0	0	0	0
TOTALS	1206	729	436	10	31

TABLE A-2. CONTINUED

75 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	7	1	3	1	2
2	41	13	27	1	0
3	72	44	22	1	5
4	103	69	31	0	3
5	83	43	35	0	5
6	198	128	64	0	6
7	32	21	11	0	0
8	94	63	30	0	1
9	7	4	3	0	0
10	151	99	52	0	0
11	17	17	0	0	0
12	170	144	26	0	0
13	1	1	0	0	0
14	7	6	1	0	0
16	0	0	0	0	0
TOTALS	983	653	305	3	22

100 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	6	1	4	0	1
2	35	13	22	0	0
3	59	38	16	1	4
4	81	55	24	0	2
5	72	38	29	1	4
6	172	113	56	2	1
7	30	19	11	0	0
8	89	63	26	0	0
9	7	4	3	0	0
10	145	102	43	0	0
11	16	16	0	0	0
12	159	143	16	0	0
13	1	1	0	0	0
14	6	5	1	0	0
16	0	0	0	0	0
TOTALS	878	611	251	4	12

TABLE A-2. CONTINUED

200 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	5	3	2	0	0
2	19	10	9	0	0
3	30	19	10	0	1
4	43	26	16	0	1
5	48	26	22	0	0
6	111	76	34	1	0
7	23	15	8	0	0
8	68	52	16	0	0
9	3	1	2	0	0
10	107	84	23	0	0
11	9	9	0	0	0
12	90	85	5	0	0
13	0	0	0	0	0
14	4	4	0	0	0
16	0	0	0	0	0
TOTALS	560	410	147	1	2

300 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	4	3	1	0	0
2	10	6	4	0	0
3	22	13	8	1	0
4	28	16	12	0	0
5	40	27	13	0	0
6	75	54	21	0	0
7	15	9	6	0	0
8	44	35	9	0	0
9	2	0	2	0	0
10	83	66	17	0	0
11	6	6	0	0	0
12	68	65	3	0	0
13	0	0	0	0	0
14	3	3	0	0	0
16	0	0	0	0	0
TOTALS	400	303	96	1	0

TABLE A-2. CONTINUED

400 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	1	1	0	0	0
2	4	2	2	0	0
3	18	12	6	0	0
4	20	11	9	0	0
5	34	23	11	0	0
6	61	45	16	0	0
7	12	7	5	0	0
8	32	23	9	0	0
9	2	1	1	0	0
10	55	44	11	0	0
11	3	3	0	0	0
12	36	34	2	0	0
13	0	0	0	0	0
14	2	2	0	0	0
16	0	0	0	0	0
TOTALS	280	208	72	0	0

500 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	0	0	0	0	0
2	3	2	1	0	0
3	15	9	6	0	0
4	16	9	7	0	0
5	28	17	11	0	0
6	50	38	12	0	0
7	9	6	3	0	0
8	24	17	7	0	0
9	2	1	1	0	0
10	47	40	7	0	0
11	2	2	0	0	0
12	27	25	2	0	0
13	0	0	0	0	0
14	2	2	0	0	0
16	0	0	0	0	0
TOTALS	225	168	57	0	0

TABLE A-2. CONTINUED

600 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	0	0	0	0	0
2	3	3	0	0	0
3	13	8	5	0	0
4	13	8	5	0	0
5	25	17	8	0	0
6	39	31	8	0	0
7	6	4	2	0	0
8	20	13	7	0	0
9	2	1	1	0	0
10	39	34	5	0	0
11	2	2	0	0	0
12	24	22	2	0	0
13	0	0	0	0	0
14	2	2	0	0	0
16	0	0	0	0	0
TOTALS	188	145	43	0	0

700 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	0	0	0	0	0
2	1	1	0	0	0
3	12	7	5	0	0
4	13	8	5	0	0
5	22	14	8	0	0
6	37	29	8	0	0
7	6	4	2	0	0
8	16	9	7	0	0
9	2	1	1	0	0
10	30	29	1	0	0
11	0	0	0	0	0
12	18	17	1	0	0
13	0	0	0	0	0
14	1	1	0	0	0
16	0	0	0	0	0
TOTALS	158	120	38	0	0

TABLE A-2. CONTINUED

800 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	0	0	0	0	0
2	1	1	0	0	0
3	12	8	4	0	0
4	12	7	5	0	0
5	21	14	7	0	0
6	31	25	6	0	0
7	6	5	1	0	0
8	14	8	6	0	0
9	2	1	1	0	0
10	27	26	1	0	0
11	0	0	0	0	0
12	15	14	1	0	0
13	0	0	0	0	0
14	1	1	0	0	0
16	0	0	0	0	0
TOTALS	142	110	32	0	0

900 MICROWATTS PER SQ. CM

1	0	0	0	0	0
2	1	1	0	0	0
3	10	6	4	0	0
4	11	7	4	0	0
5	19	13	6	0	0
6	28	22	6	0	0
7	6	5	1	0	0
8	11	7	4	0	0
9	2	1	1	0	0
10	23	22	1	0	0
11	0	0	0	0	0
12	12	11	1	0	0
13	0	0	0	0	0
14	1	1	0	0	0
16	0	0	0	0	0
TOTALS	124	96	28	0	0

TABLE A-2. CONTINUED

1000 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	0	0	0	0	0
2	1	1	0	0	0
3	9	7	2	0	0
4	10	7	3	0	0
5	19	14	5	0	0
6	28	22	6	0	0
7	5	5	0	0	0
8	8	5	3	0	0
9	2	1	1	0	0
10	21	20	1	0	0
11	0	0	0	0	0
12	12	11	1	0	0
13	0	0	0	0	0
14	1	1	0	0	0
16	0	0	0	0	0
TOTALS	116	94	22	0	0
2000 MICROWATTS PER SQ. CM					
1	0	0	0	0	0
2	0	0	0	0	0
3	8	7	1	0	0
4	4	2	2	0	0
5	11	8	3	0	0
6	17	16	1	0	0
7	3	3	0	0	0
8	3	2	1	0	0
9	1	1	0	0	0
10	8	7	1	0	0
11	0	0	0	0	0
12	3	3	0	0	0
13	0	0	0	0	0
14	1	1	0	0	0
16	0	0	0	0	0
TOTALS	59	50	9	0	0

TABLE A-2. CONTINUED

5000 MICROWATTS PER SQ. CM

NUMBER OF BAYS	TOTAL STATIONS REQUIRING COMPLIANCE	BETTER STANDARD ANTENNA	NEW 1/2 WAVE ANTENNA	BETTER 1/2 WAVE ANTENNA	UNFIXABLE
1	0	0	0	0	0
2	0	0	0	0	0
3	4	4	0	0	0
4	0	0	0	0	0
5	2	2	0	0	0
6	4	4	0	0	0
7	1	1	0	0	0
8	2	2	0	0	0
9	0	0	0	0	0
10	2	2	0	0	0
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
16	0	0	0	0	0
TOTALS	15	15	0	0	0

10000 MICROWATTS PER SQ. CM

1	0	0	0	0	0
2	0	0	0	0	0
3	1	1	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	1	1	0	0	0
7	0	0	0	0	0
8	1	1	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
16	0	0	0	0	0
TOTALS	3	3	0	0	0

which Fix 2 and 3 would be insufficient to achieve compliance at the given power density level. These "unfixable" stations are distributed among 3 additional measures according to the percentages given in Table A-3. Table A-4 lists FM stations by the size of the antenna whose antennas are co-mounted with one or more others on a ground-mounted tower. The descriptions of the data are identical to those for Table A-2.

The medium-level cost of Fix 2 for both single-mounted FM (denoted SFM) and multiple-mounted FM (denoted MFM) stations for the 100 $\mu W/cm^2$ level, which will be the level used in this example calculation, is computed according to the gross number of SFM and MFM stations as follows

$$TC2 = \sum_{b=1}^{14} \left[GNS(b)_{sfm,f2} \cdot CNA(b)_{f2} \right] + GNS(16)_{sfm,f2} \cdot CNA(16)_{f2} + \sum_{b=1}^{14} \left[GNS(b)_{mfm,f2} \cdot CNA(b)_{f2} \right] + GNS(16)_{mfm,f2} \cdot CNA(16)_{f2} , \qquad (A\text{-}1)$$

where

$TC2$ = total cost of Fix 2,

$GNS\ (b)_{sfm,f2}$ = gross number of SFM stations requiring an antenna of size b (number of bays) for Fix 2 (Table A-2),

$GNS\ (b)_{mfm,f2}$ = gross number of MFM stations requiring an antenna of size b for Fix 2 (Table A-4), and

$CNA\ (b)_{f2}$ = cost of a new antenna of size b for Fix 2 (Table A-1.b).

Refer to Table A-5 for an example of the calculation of Fix 2 medium-level costs for compliance with 100 $\mu W/cm^2$ guidance level. The costs for CNA in Table A-5 are from Table A-1.b. The identical procedure is followed for Fix 3, using the medium-level cost schedule in Table A-1.c for CNA.

$$TC3 = \sum_{b=1}^{14} \left[GNS(b)_{sfm,f3} \cdot CNA(b)_{f3} \right] + GNS(16)_{sfm,f3} \cdot CNA(16)_{f3} + \sum_{b=1}^{14} \left[GNS(b)_{mfm,f3} \cdot CNA_{f3} \right] + GNS(16)_{mfm,f3} \cdot CNA(16)_{f3} , \qquad (A\text{-}2)$$

Table A-3. Distribution of compliance measures 4, 5, and 6 among single and multiple FM stations requiring antennas mounted on taller towers.

	Fix 4 Lease on another existing tower	Fix 5 Build taller tower, existing site	Fix 6 Build taller tower, new site	Total of three fixes
	Percentage of stations			
Low-cost analysis	12.5	75.0	12.5	100
Medium-cost analysis	25.0	50.0	25.0	100
High-cost analysis	37.5	25.0	37.5	100

Source: Table 8, Volume 1.

where

$TC3$ = total cost of Fix 3,

$GNS(b)_{sfm,f3}$ = gross number of SFM stations requiring an antenna of size b (number of bays) for Fix 3 (Table A-1),

$GNS(b)_{mfm,f3}$ = gross number of MFM stations requiring an antenna of size b for Fix 3 (Table A-4), and

$CNA\ (b)_{f3}$ = cost of a new antenna of size b for Fix 3 (Table A-1.c).

Refer to Table A-6 for an example of these computations.

The cost of Fix 4 for SFMs is more straightforward. Fix 4 is the first of three applied to the "unfixable" antennas, all of which involve raising the antenna to reduce the power density on the ground. Fix 4 represents the option to lease space at a higher elevation on another station's tower.

$$TC4 = (GNS_{sfm,u} \cdot F4 \cdot CEQ) + (GNS_{sfm,u} \cdot F4 \cdot CLE) + (GNS_{mfm,u} \cdot F4 \cdot MFM \cdot CEQ) + (GNS_{mfm,u} \cdot F4 \cdot CLE), \quad \text{(A-3)}$$

TABLE A-4. AN ANALYSIS OF THE REQUIREMENTS FOR COMPLIANCE WITH GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM MULTIPLE, GROUND-MOUNTED FM RADIO STATIONS IS GIVEN FOR 18 POWER DENSITY LEVELS. SOURCE: EPA, ORP, LAS VEGAS, NV.

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1 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	8	0	0	8
2	48	10	19	19
3	42	2	9	31
4	47	0	10	37
5	26	1	1	24
6	53	0	6	47
7	10	0	4	6
8	39	0	13	26
9	4	0	4	0
10	25	0	5	20
11	1	0	1	0
12	31	0	22	9
13	0	0	0	0
14	9	0	9	0
16	5	0	4	1
TOTALS	348	13	107	228

10 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	6	0	1	5
2	24	8	11	5
3	35	8	15	12
4	39	7	9	23
5	25	1	10	14
6	51	9	18	24
7	9	2	3	4
8	35	4	20	11
9	3	0	3	0
10	23	1	13	9
11	1	1	0	0
12	29	8	19	2
13	0	0	0	0
14	4	3	1	0
16	3	1	2	0
TOTALS	287	53	125	109

TABLE A-4. CONTINUED

20 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	6	0	2	4
2	18	8	7	3
3	29	7	10	12
4	35	6	8	21
5	24	4	8	12
6	49	10	22	17
7	8	2	2	4
8	26	3	13	10
9	2	0	2	0
10	22	3	13	6
11	1	1	0	0
12	26	12	13	1
13	0	0	0	0
14	3	2	1	0
16	2	0	2	0
TOTALS	251	58	103	90

50 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	5	2	3	0
2	9	5	1	3
3	22	5	9	8
4	31	6	10	15
5	23	7	9	7
6	44	16	21	7
7	7	3	2	2
8	19	5	10	4
9	0	0	0	0
10	18	7	6	5
11	1	1	0	0
12	20	14	6	0
13	0	0	0	0
14	2	2	0	0
16	1	1	0	0
TOTALS	202	74	77	51

TABLE A-4. CONTINUED

75 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	4	1	3	0
2	5	1	1	3
3	18	5	8	5
4	27	5	8	14
5	22	6	9	7
6	39	13	20	6
7	6	2	3	1
8	18	4	14	0
9	0	0	0	0
10	17	7	7	3
11	0	0	0	0
12	14	10	4	0
13	0	0	0	0
14	1	1	0	0
16	1	1	0	0
TOTALS	172	56	77	39

100 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	3	1	2	0
2	4	1	3	0
3	17	6	11	0
4	26	4	16	6
5	22	6	10	6
6	36	10	25	1
7	5	1	3	1
8	17	5	12	0
9	0	0	0	0
10	16	7	7	2
11	0	0	0	0
12	11	7	4	0
13	0	0	0	0
14	0	0	0	0
16	1	1	0	0
TOTALS	158	49	93	16

TABLE A-4. CONTINUED

200 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	1	1	0	0
2	2	1	1	0
3	13	3	10	0
4	20	3	13	4
5	14	1	10	3
6	27	10	17	0
7	3	1	2	0
8	12	4	8	0
9	0	0	0	0
10	15	8	7	0
11	0	0	0	0
12	7	6	1	0
13	0	0	0	0
14	0	0	0	0
16	1	1	0	0
TOTALS	115	39	69	7

300 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	0	0	0	0
2	1	0	1	0
3	13	3	10	0
4	20	5	15	0
5	13	3	10	0
6	22	9	13	0
7	2	0	2	0
8	10	4	6	0
9	0	0	0	0
10	13	9	4	0
11	0	0	0	0
12	6	5	1	0
13	0	0	0	0
14	0	0	0	0
16	1	1	0	0
TOTALS	101	39	62	0

TABLE A-4. CONTINUED

400 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	0	0	0	0
2	1	0	1	0
3	11	3	8	0
4	20	6	14	0
5	12	3	9	0
6	18	9	9	0
7	2	0	2	0
8	7	2	5	0
9	0	0	0	0
10	12	9	3	0
11	0	0	0	0
12	6	5	1	0
13	0	0	0	0
14	0	0	0	0
16	1	1	0	0
TOTALS	90	38	52	0

500 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	0	0	0	0
2	1	0	1	0
3	11	4	7	0
4	16	5	11	0
5	12	4	8	0
6	16	9	7	0
7	2	0	2	0
8	7	2	5	0
9	0	0	0	0
10	12	9	3	0
11	0	0	0	0
12	6	5	1	0
13	0	0	0	0
14	0	0	0	0
16	1	1	0	0
TOTALS	84	39	45	0

TABLE A-4. CONTINUED

600 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	0	0	0	0
2	1	0	1	0
3	10	5	5	0
4	15	5	10	0
5	12	4	8	0
6	14	8	6	0
7	2	0	2	
8	5	1	4	0
9	0	0	0	0
10	10	8	2	0
11	0	0	0	0
12	4	4	0	0
13	0	0	0	0
14	0	0	0	0
16	0	0	0	0
TOTALS	73	35	38	0

700 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	0	0	0	0
2	1	1	0	0
3	9	5	4	0
4	12	5	7	0
5	11	4	7	0
6	11	7	4	0
7	2	1	1	0
8	5	1	4	0
9	0	0	0	0
10	8	7	1	0
11	0	0	0	0
12	3	3	0	0
13	0	0	0	0
14	0	0	0	0
16	0	0	0	0
TOTALS	62	34	28	0

TABLE A-4. CONTINUED

800 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	0	0	0	0
2	1	1	0	0
3	9	6	3	0
4	12	5	7	0
5	11	4	7	0
6	11	7	4	0
7	2	1	1	0
8	4	1	3	0
9	0	0	0	0
10	8	7	1	0
11	0	0	0	0
12	3	3	0	0
13	0	0	0	0
14	0	0	0	0
16	0	0	0	0
TOTALS	61	35	26	0

900 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	0	0	0	0
2	1	1	0	0
3	7	5	2	0
4	12	5	7	0
5	10	5	5	0
6	11	7	4	0
7	2	1	1	0
8	4	1	3	0
9	0	0	0	0
10	7	6	1	0
11	0	0	0	0
12	3	3	0	0
13	0	0	0	0
14	0	0	0	0
16	0	0	0	0
TOTALS	57	34	23	0

TABLE A-4. CONTINUED

1000 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	0	0	0	0
2	1	1	0	0
3	6	5	1	0
4	12	6	6	0
5	10	5	5	0
6	10	7	3	0
7	2	1	1	0
8	3	2	1	0
9	0	0	0	0
10	6	5	1	0
11	0	0	0	0
12	3	3	0	0
13	0	0	0	0
14	0	0	0	0
16	0	0	0	0
TOTALS	53	35	18	0

2000 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	0	0	0	0
2	1	1	0	0
3	1	1	0	0
4	5	2	3	0
5	6	5	1	0
6	6	5	1	0
7	2	1	1	0
8	3	3	0	0
9	0	0	0	0
10	2	2	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
16	0	0	0	0
TOTALS	26	20	6	0

TABLE A-4. CONTINUED

5000 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	2	2	0	0
5	2	2	0	0
6	1	1	0	0
7	1	1	0	0
8	2	2	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
16	0	0	0	0
TOTALS	8	8	0	0

10000 MICROWATTS PER SQ. CM

# BAYS	# STATIONS >PPD	ANTENNA FIX	1/2 WAVE FIX	UNFIXABLE
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
16	0	0	0	0
TOTALS	0	0	0	0

Table A-5. A sample calculation is given of the cost of Fix 2 for all FM radio stations that can use this measure to comply with guidelines limiting public exposure to radiofrequency radiation (the 100 microwatts per sq. cm guidance and medium-cost level are assumed).[a]

Number of Bays[d]	Single FM Stations[b]			Multiple FM Stations[c]		
	GNS[e]	CNA[f]	Cost[g]	GNS[e]	CNA[f]	Cost[g]
1	1	$4,690	$4,690	1	$4,690	$4,690
2	13	8,300	107,900	1	8,300	8,300
3	38	12,200	463,600	6	12,200	73,200
4	55	16,200	891,000	4	16,200	64,800
5	38	21,100	801,800	6	21,100	126,600
6	113	24,300	2,745,900	10	24,300	243,000
7	19	28,300	537,700	1	28,300	28,300
8	63	32,700	2,060,100	5	32,700	163,500
9	4	36,900	147,600	0	36,900	
10	102	41,000	4,182,000	7	41,000	287,000
11	16	44,700	715,200	0	44,700	
12	143	50,000	7,150,000	7	50,000	350,000
13	1	54,200	54,200	0	54,200	
14	5	59,300	296,500	0	59,300	
16	0	67,700		1	67,700	67,700
	611		$20,158,190	49		$1,417,090

---

[a] Fix 2 is to replace the existing antenna with a new model having a broadcast pattern that delivers little of its signal to the ground near the antenna.

[b] Stations whose antennas are mounted alone on a ground-mounted tower.

[c] Stations whose antennas are co-mounted on the same ground-mounted tower or on towers within 100 ft of another tower.

[d] The size and signal amplification capabilities of the antenna expressed in number of elements or bays.

[e] The number of SFM or MFM stations with the given size of antenna (refer to Tables A-2 and A-4).

[f] The cost of a new antenna of the given size (refer to Table A-1.b).

[g] Number of stations times the cost of the antenna.

Table A-6. A sample calculation is given of the cost of Fix 3 for all FM radio stations that must use this measure to comply with guidelines limiting public exposure to radiofrequency radiation (the 100 microwatts per sq. cm guidance and medium-cost level are assumed).[a]

Number	Single FM Stations[b]			Multiple FM Stations[c]		
of Bays[d]	GNS[e]	CNA[f]	Cost[g]	GNS[e]	CNA[f]	Cost[g]
1	4	$4,690	$18,760	2	$4,690	$9,380
2	22	14,110	310,420	3	14,110	42,330
3	17	21,960	373,320	11	21,960	241,560
4	24	30,375	729,000	16	30,375	486,000
5	30	39,550	1,186,500	10	39,550	395,500
6	58	45,575	2,643,350	25	45,575	1,139,375
7	11	53,075	583,825	3	53,075	159,225
8	26	61,325	1,594,450	12	61,325	735,900
9	3	69,200	207,600	0	69,200	
10	43	76,875	3,305,625	7	76,875	538,125
11	0	83,825		0	83,825	
12	16	93,750	1,500,000	4	93,750	375,000
13	0	101,625		0	101,625	
14	1	111,200	111,200	0	111,200	
16	0	126,950		0	126,950	
	255		$12,564,050	93		$4,122,395

---

[a] Fix 3 is to replace the existing antenna with a new half-wave model having a broadcast pattern that delivers little of its signal to the ground near the antenna.

[b] Stations whose antennas are mounted alone on a ground-mounted tower.

[c] Stations whose antennas are co-mounted on the same ground-mounted tower or on towers within 100 ft of another tower.

[d] The size and signal amplification capabilities of the antenna expressed in number of elements or bays.

[e] The number of SFM or MFM stations with the given size of antenna (refer to Tables A-2 and A-4).

[f] The cost of a new antenna of the given size (refer to Table A-1.c).

[g] Number of stations times the cost of the antenna.

where

$TC4$ = total cost of Fix 4,

$GNS_{sfm,u}$ = the gross number of SFM stations that cannot use Fix 2 or Fix 3 to comply (Table A-2),

$GNS_{mfm,u}$ = the gross number of MFM stations that cannot use Fix 2 or Fix 3 to comply (Table A-4),

$F4$ = the distribution factor for Fix 4 at the medium cost level (Table A-3),

CEQ = the cost of equipment for Fix 4 (Table A-1.d),

CLE = the present value of the lease cost (Table A-1.d), and

MFM = a factor reflecting the assumption that one third of the MFM stations will share an antenna with at least one other station $(1-(1/3 \cdot 1/2) = 0.83)$.

Refer to Table A-7 for an example of these computations for the 100 $\mu W/cm^2$ level.

Fix 5 involves building a taller, replacement tower on the same site as the existing tower. To estimate the cost of this measure, it is necessary to refer to two tables. Table A-8 gives the number of SFM stations for which a taller tower of the height specified in column 1 is required with a new half-wavelength antenna to reduce power density to the levels specified across the column entries. Table A-9 gives the same information for MFM stations. The row of totals shows the number of unfixable stations at each power density level (see Table A-2 for SFM and Table A-4 for MFM stations). At the 100 $\mu W/cm^2$ level, for instance, one station requires a 50-ft tower, the cost of which is given in Table A-1.e.

The cost of Fix 5 is calculated according to

$$TC5 = \sum_{h=1}^{12} \left[(GNS(h)_{sfm,f5} \cdot CNT(h)_{f5} \cdot F5 \right] + \sum_{h=1}^{12} \left[GNS(h)_{mfm,f5} \cdot CNT(h)_{f5} \cdot F5 \cdot MFM \right], \tag{A-4}$$

where

$TC5$ = total cost of Fix 5,

$GNS(h)_{sfm,f5}$ = the gross number of SFM stations requiring a tower of one of 12 heights, h, using Fix 5 (Table A-8),

$GNS(h)_{mfm,f5}$ = the gross number of MFM stations requiring a tower of one of 12 heights, h, using Fix 5 (Table A-8),

$CNT(h)_{f5}$ = cost of a new tower of one of 12 heights, h (Table A-1.e),

Table A-7. A sample calculation is given of the cost of Fix 4 for all FM radio stations that must use this measure to comply with guidelines limiting public exposure to radiofrequency radiation (the 100 microwatts per sq. cm guidance and medium-cost level are assumed).[a]

	Single FM Stations[b]		Multiple FM Stations[c]	
	Equipment	Lease	Equipment	Lease
GNS[d]	12	12	16	16
Fix 4 factor[e]	0.25	0.25	0.25	0.25
NNS[f]	3	3	4	4
Unit cost[g]	$23,000	$59,500	$23,000	$59,500
MFM Factor[h]	--	--	0.83	1.00
Cost[i]	$69,000	$178,500	$76,360	$238,000

---

[a] Fix 4 is to obtain a higher antenna location by leasing space on another station's tower.

[b] Stations whose antennas are mounted alone on a ground-mounted tower.

[c] Stations whose antennas are comounted on the same ground-mounted tower.

[d] The gross number of SFM or MFM stations using Fix 4, 5, or 6 (refer to Table A-2 and A-4).

[e] Refer to Table A-3.

[f] GNS times Fix 4 factor to obtain the net number of stations.

[g] Annual lease cost discounted at 10% for 50 years; refer to Table A-1.d.

[h] One third of the MFM stations are assumed to share an antenna with one other station; therefore, the cost is reduced by the factor (1-(1/2*1/3)).

[i] The number of stations times the unit cost times the MFM factor.

Table A-8. The number of SFM stations is shown that require higher towers to meet the seven power density levels for which this compliance measure is necessary (Source: EPA, ORP, Las Vegas, NV).

Tower height required	Power density level, $\mu W/cm^2$						
	1	10	20	50	75	100	200
ft	Number of stations						
50			1	1	1	1	
75			7	4	6	1	1
100			14	14	8	7	1
125			21	8	5	2	
150			26	2		1	
175		182	11		1		
200			5	1	1		
250			4	1			
300			2				
350							
400							
500	922						
TOTALS	922	182	91	31	22	12	2

$GNS(h)_{mfm,f5}$ = the gross number of MFM stations requiring a tower of one of 12 heights, h, using Fix 5 (Table A-8),

$CNT(h)_{f5}$ = cost of a new tower of one of 12 heights, h (Table A-1.e),

F5 = the distribution factor for Fix 5 at the medium cost level (Table A-3), and

MFM = a factor reflecting the assumption that one third of the MFM stations will share an antenna and tower with at least one other station ($1-(1/2 \cdot 1/3) = 0.83$).

Refer to Table A-10 for an example of these calculations for Fix 5 for SFMs and MFMS.

Table A-9. The number of MFM stations is shown that require higher towers to meet the seven power density levels for which this compliance measure is necessary (Source: EPA, ORP, Las Vegas, NV).

Tower height required	Power density level, $\mu W/cm^2$						
	1	10	20	50	75	100	200
ft	Number of stations						
50							
75							
100				3	6	3	3
125			5	3	4	7	
150			17	13	14	3	4
175		109	11	13	4		
200			5	7	7	3	
250			22	3	4		
300			11	9			
350			8				
400			11				
500	228						
TOTALS	228	109	90	51	39	16	7

Fix 6 involves building a taller, replacement tower on a new site; therefore, the costs for this measure, Table A-1.f, are higher than for Fix 5. The data describing tower height required for SFMs for Fix 6 are the same as for Fix 5 and are given in Table A-8. Required tower height data for MFMs are given in Table A-9. The cost of Fix 6 is calculated using a formula similar to that for Fix 5.

$$TC6 = \sum_{h=1}^{8} \left[GNS(h)_{sfm,f6} \cdot CNT\,(h)_{f6} \cdot F6 \right] + \sum_{h=1}^{8} \left[GNS(h)_{mfm,f6} \cdot CNT\,(h)_{f6} \cdot F6 \cdot MFM \right], \tag{A-5}$$

where

TC6 = total cost of Fix 6 ,

$GNS\,(h)_{sfm,f6}$ = the gross number of SFM stations that require a tower of one of eight heights, h, using Fix 6 (Table A-9),

Table A-10. A sample calculation is given of the cost of Fix 5 for all FM radio stations that must use this measure to comply with guidelines limiting public exposure to radiofrequency radiation (the 100 microwatts per sq. cm guidance and medium-cost level are assumed).[a]

Single FM stations[b]					Multiple FM stations[c]				
Tower height required (less than) ft	GNS[d]	Fix 5 factor[e]	Cost of tower @ given height[f]	SFM total[g]	Tower height required (less than) ft	GNS[d]	Fix 5 factor[e]	Cost of tower @ given height[f]	MFM total[g]
50	1	0.50	$24,500	$12,250	50		0.50	$24,500	
75	1	0.50	26,800	13,400	75		0.50	26,800	
100	7	0.50	29,200	102,200	100	3	0.50	29,200	$43,800
125	2	0.50	32,600	32,600	125	7	0.50	32,600	114,100
150	1	0.50	36,000	18,000	150	3	0.50	36,000	54,000
175		0.50	39,200		175		0.50	39,200	
200		0.50	42,800		200	3	0.50	42,800	64,200
250		0.50	48,700		250		0.50	48,700	
300		0.50	56,900		300		0.50	56,900	
350		0.50	72,600		350		0.50	72,600	
400		0.50	83,400		400		0.50	83,400	
500		0.50	105,900		500		0.50	105,900	
	12			$178,450		16			$276,100
							MFM factor[h]		0.83
							Net cost		$229,163

---

[a] Fix 5 is to build a new antenna on the existing site to raise the antenna.

[b] Stations whose antennas are mounted alone on a ground-mounted tower.

[c] Stations whose antennas are comounted on the same ground-mounted tower.

[d] The gross number of SFM or MFM stations using Fix 5 (refer to Table A-8 and A-9).

[e] Refer to Table A-3.

[f] Refer to Table A-1.e for unit costs.

[g] The gross number of stations times the Fix 5 factor times the unit cost.

[h] One third of the MFM stations are assumed to share an antenna with one other station; therefore, the cost is reduced by the factor (1-(1/2*1/3)).

$GNS(h)_{mfm,f6}$ = the gross number of MFM stations that require a tower of one of eight heights, h, using Fix 6 (Table A-9),

$CNT(h)_{f6}$ = cost of a new tower of one of 12 heights, h (Table A-1.f),

F6 = the distribution factor for Fix 6 at the medium cost level (Table A-3), and

MFM = a factor reflecting the assumption that one third of the MFM stations will share an antenna and tower with at least one other station ($1-(1/2 \cdot 1/3) = 0.83$).

Refer to Table A-11 for an example of these calculations for Fix 6 for SFMs and MFMs. The costs for each of the compliance measures for the 100 $\mu W/cm^2$ guidance at the medium-cost level are presented in Table A-12. The costs are adjusted by the factor 1.123 because there are 4374 FM stations, but the EPA data base contains data on only 3895 of these (4374/3895 = 1.123). The cost of any guidance level studied can be computed at any of the three cost levels by using the cost data presented in these tables and using the procedure described in this appendix.

SOCIAL COSTS

The cost to society-at-large includes the cost of carrying out a survey at all 4,374 stations and the cost of installing one of five compliance measures at those stations that do not comply with the standard. Table A-12 shows the costs for the various fixes and Table A-13 shows the total cost to society-at-large.

The cost to society is computed using the following

$$TCC = TC1+TC2+TC3+TC4E+TC4L+TC5+TC6. \tag{A-6}$$

$$TCS = 4374\ (\$2{,}000) = \$8.748 \text{ million}. \tag{A-7}$$

$$TGC = TCC+TCS. \tag{A-8}$$

$$ACF = TGC/5. \tag{A-9}$$

$$PV = \sum_{k=1}^{5} ACF/1.1^{k-1}\ , \tag{A-10}$$

where

TCC = total cost of compliance measures;

Table A-11. A sample calculation is given of the cost of Fix 6 for all FM radio stations that must use this measure to comply with guidelines limiting public exposure to radiofrequency radiation for the 100 microwatts per sq. cm guidance at the medium-cost level.[a]

Single FM stations[b]					Multiple FM stations[c]				
Tower height required (less than) ft	GNS[d]	Fix 6 factor[e]	Cost of tower @ given height[f]	SFM total[g]	Tower height required (less than) ft	GNS[d]	Fix 6 factor[e]	Cost of tower @ given height[f]	MFM total[g]
100	9	0.25	$117,500	$264,375	100	3	0.25	$117,500	$88,125
150	3	0.25	120,750	90,563	150	10	0.25	120,750	301,875
200		0.25	124,500		200	3	0.25	124,500	93,375
250		0.25	128,250		250		0.25	128,250	
300		0.25	132,000		300		0.25	132,000	
350		0.25	140,000		350		0.25	140,000	
400		0.25	151,000		400		0.25	151,000	
500		0.25	180,000		500		0.25	180,000	
	12			$354,938		16			$483,375
					MFM factor[h]				0.83
					Net cost			$401,201	

---

[a] Fix 6 is to build a new antenna on a new site to raise the antenna.

[b] Stations whose antennas are mounted alone on a ground-mounted tower.

[c] Stations whose antennas are comounted on the same ground-mounted tower.

[d] The gross number of SFM or MFM stations using Fix 6 (refer to Tables A-8 and A-9).

[e] Refer to Table A-3.

[f] Refer to Table A-1.f for unit costs.

[g] The gross number of stations times the Fix 6 factor times the unit cost.

[h] One third of the MFM stations are assumed to share an antenna with one other station; therefore, the cost is reduced by the factor (1-(1/2*1/3)).

Table A-12. The total cost by fix to FM radio broadcast stations complying with guidelines limiting public exposure to radiofrequency radiation is summarized for the 100 microwatts per sq. cm guidance at the medium-cost level.

Fix	Fix 1	Fix 2	Fix 3	Fix 4	Fix 5	Fix 6	Total
SFM	0	$20,158,190	$12,564,050	$247,500	$178,450	$354,938	$33,503,128
MFM	0	1,417,090	4,122,395	314,360	229,163	401,201	6,484,209
Total	0	21,575,280	16,686,445	561,860	407,613	756,139	39,987,337
Adjusted total[a]	0	$24,229,039	$18,738,878	$630,969	$457,749	$849,144	$44,905,779

[a] Values from Tables A-5, A-6, A-7, A-10, and A-11 adjusted by the ratio of the number of actual FM stations to the number of stations in the EPA data base, (4374/3895) = 1.123.

Table A-13. A sample calculation of the potential cost to the society-at-large of guidelines limiting public exposure to radiofrequency radiation from FM radio broadcast sources is given for the 100 microwatts per sq. cm guidance at the medium-cost level.

Total cost of compliance measures (TCC)[a]	$44,905,779
Total cost of a survey (TCS)	88,748,000
Total gross cost of compliance	$53,653,779
Annual cash flow cost (ACF)	$10,730,756
Present value (PV)	$44,745,808

[a] From Table A-12

TC1,TC2,TC3,TC4E,TC4L,TC5, and TC6 are the total costs of the respective fixes. Fix 4 has an equipment (TC4E) and a lease (TC4L) component. For the medium unit cost of Fix 4, TC4L = \$59,500 and TC4E = \$23,000 (Table A-1.d). The lease cost, TC4L, is the present value of the annual lease cost, \$6,000, discounted at 10% for 50 years;

TCS = total cost of the survey;
TGC = total gross cost of compliance;
ACF = annual cash flow cost;
PV = present value of the cost of compliance; and
K = Year index, 1 to 5.

COST TO INDUSTRY

The cost to the FM broadcast industry of a guideline limiting public exposure to radiofrequency radiation includes the survey cost as well as the capital and finance costs of the compliance measures. This section illustrates how the annual, total, and average cash flow cost and the present value of the net after tax cost are computed for the $100\,\mu W/cm^2$ guidance level. It is assumed that compliance costs are spread evenly among five cohorts of stations and that loan amortization and interest payments continue for five years after initial installation of the compliance measure. The data requirements for this calculation are:

Total cost of survey, TCS	\$8,748,000
Total cost, Fix 2, TC2	\$24,229,039
Total cost, Fix 3, TC3	\$18,738,878
Total cost, Fix 4 - equipment, TC4E	\$163,239
Annualized cost, Fix 4 - lease, AC4L	\$107,391
Total cost, Fix 5, TC5	\$457,749
Total cost, Fix 6, TC6	\$849,144
Tangible property (TC2+TC3+TC4E+TC5+TC6), TP	\$44,438,050
Expensed costs, year 0 (AC4L+TCS), EX (0)	\$8,855,391
Expensed costs, years 1-5 (AC4L), EX (k)	\$107,391
Total number of stations fixed (Table D-4, Vol. 2)	1,163
Loan amount (75% of tangible property), TLP	\$33,328,537
Down payment (25% of tangible property), DP	\$11,109,512
Annual principal payment (loan amount ÷ 5), AM (k)	\$6,665,707

Investment tax credit (10% of tangible property), ITC	\$4,443,805
Effective tax rate	0.46
Interest rate	0.10
Repayment period	5 yrs

Depreciation schedule (fraction of tangible property)

Year 1	0.15 (TP) = DPN(1)
Year 2	0.22(TP) = DPN(2)
Year 3	0.21(TP) = DPN(3)
Year 4	0.21(TP) = DPN(4)
Year 5	0.21(TP) = DPN(5)

The lease costs shown in Table A-1.d are the present value of annual lease costs (\$3,000, \$6,000, and \$9,000 for low, medium, and high cost, respectively) discounted over 50 years at 10%. However, for the industry and average firm analyses, the present value of the lease cost is annualized over the six years of assumed compliance expenditure as follows:

$$AC4L = TC4L\left[\frac{i(1+i)^k}{(1+i)^k-1}\right], \qquad (A-11)$$

where

AC4L = the annualized cost of the lease,
TC4L = the present value of the lease, and
k = the year counter, 1 to 6.

For i = 0.10 and k = 6, AC4L = 0.2296 (TC4L). Therefore, the value used in the industry analysis for Fix 4 is calculated from the values for Fix 4 - lease (Table A-7) for SFM + MFM as follows

$$AC4L = ((\$178,500 + \$238,000)\ 0.2296)\ 1.123 = \$107,391.$$

The calculation of the cost of compliance to the FM broadcast industry considers the gross cash flow cost, tax shelter effect, the net cash flow cost that results from expenses, down payment, loan amortization, interest payments, depreciation, and investment tax credit. The interest is assumed to be paid on the loan balance at the end of each year. The only non-depreciable expenses considered are that of the survey and the lease portion of Fix 4. The tax effect of expenses, interest, and depreciation is determined by multiplying each of these factors by the effective tax rate. The investment tax credit is based on the value of the tangible property in the first year, which is represented as k equal to zero, where k is the year index. The yearly gross cash flow cost for each cohort is determined as follows:

$$GCF(k) = DP(0) + TCS(0) + AC4L, \text{ for } k = 0, \text{ and} \qquad \text{(A-12)}$$
$$GCF(k) = AM(k) + IN(k) + AC4L, \text{ for } k = 1,5,$$

where

GCF(k) = gross cash flow cost,
DP(0) = down payment,
TCS(0) = total cost of survey,
AC4L = annualized lease,
AM(k) = loan amortization,
IN(k) = interest payment, and
k = year index, 0 = year of compliance; 1-5 = continued compliance expenses.

The yearly tax shelter effect is given by

$$TS(k) = TREX(0) + ITC(0), \text{ for } k = 0, \text{ or} \qquad \text{(A-13)}$$
$$TS(k) = TRIN(k) + TREX(k) + TRDPN(k), \text{ for } k = 1,5,$$

where

TS(k) = tax shelter in year k,
TREX = $0.46 \cdot EX(k)$,
ITC = investment tax credit,
TRIN = $0.46 \cdot IN(k)$,
TRDPN = $0.46 \cdot DPN(k)$, and
k = year index, 0 to 5.

The net cash flow cost for the FM broadcast industry in year k, NCF(k), is the difference between the gross cash flow cost GCF(k) and the tax shelter TS(k) and is given by

$$NCF(k) = GCF(k) - TS(k) . \qquad \text{(A-14)}$$

Table A-14 shows how costs are calculated for a cohort of FM broadcast stations using the variables discussed above for compliance with the 100 $\mu W/cm^2$ guideline. The values in the last row of Table A-14 are shown for each cohort in Table A-15. The additional values shown in Tables A-14 and A-15 are computed as follows:

Table A-14. A sample calculation of the potential cost to the FM broadcast industry of guidelines limiting public exposure to radiofrequency radiation is given for the 100 microwatts per sq. cm guidance at the medium cost level. The cost to a cohort of complying stations is presented.

	Year					
	0	1	2	3	4	5
Parameter	Industry costs					
EX	$8.855	$0.107	$0.107	$0.107	$0.107	$0.107
DP	11.110					
AM		6.666	6.666	6.666	6.666	6.666
IN		3.333	2.666	2.000	1.333	0.667
GCF	19.965	10.106	9.439	8.773	8.106	7.440
ITC	4.444					
TREX	4.073	0.049	0.049	0.049	0.049	0.049
TRIN		1.533	1.226	0.920	0.613	0.307
TRDPN		3.066	4.497	4.293	4.293	4.293
TS	8.517	4.649	5.773	5.262	4.955	4.649
NCF	$11.448	$5.457	$3.666	$3.511	$3.151	$2.791
	Cohort costs					
CNCF	$2.290	$1.091	$0.733	$0.702	$0.630	$0.558

Table A-15. A sample calculation of the potential cost to the FM broadcast industry of guidelines limiting public exposure to radiofrequency radiation is given for the 100 microwatts per sq. cm guidance at the medium cost level. The yearly net cash flow costs, average cash flow costs, and present value are calculated.

	Year									
	1	2	3	4	5	6	7	8	9	10
Cohort	Cohort costs									
CNCF 1	$2.290	$1.091	$0.733	$0.702	$0.630	$0.558				
CNCF 2		2.290	1.091	0.733	0.702	0.630	0.558			
CNCF 3			2.290	1.091	0.733	0.702	0.630	0.558		
CNCF 4				2.290	1.091	0.733	0.702	0.630	0.558	
CNCF 5					2.290	1.091	0.733	0.702	0.630	0.558
TNCF	$2.290	$3.381	$4.114	$4.816	$5.447	$3.715	$2.624	$1.891	$1.188	$0.558
ANCF	$3.002									
PV	$21.651									

$$CNCF(k) = NCF(k)/5 , \qquad (A\text{-}15)$$

where

$CNCF(k)$ = the cohort net cash flow cost in year k, and

$NCF(k)$ = the industry net cash flow cost in year k.

The six years of cohort costs CNCF(k) for five cohorts are spread over a total of 10 years as shown in Table A-15. The total cost for each year, TNCF(k), is the sum of the individual CNCF(k)s for a given year; because the five cohorts' expenses occur over six years and cohort compliance is staggered over five years, the costs to industry are spread over a 10 year period. See Table A-15.

$$ANCF = \sum_{k=1}^{10} TNCF(k) \;/10 . \qquad (A\text{-}16)$$

$$PV = \sum_{k=1}^{10} TNCF(k)/1.1^{k-1} , \qquad (A\text{-}17)$$

where

$ANCF(k)$ = the average annual industry net cash flow cost in year k,

$TNCF(k)$ = the total net cash flow cost for all five cohorts, and

PV = present value of the cost to industry.

EFFECTS ON THE AVERAGE PROFITABLE BROADCAST STATION

In this section, a sample calculation is presented of the cost of the 100 $\mu W/cm^2$ guideline to the average profitable FM station. The objective is to determine the net annual cost of compliance over a six year period. From this, the present value of the net cost of compliance is determined. It is assumed that the average profitable FM station has a yearly gross income of $139,400 throughout the period of analysis (refer to Volume 1).

The average station gross cash flow cost of compliance is given by the expression

$$AGCF(k) = ACS(k) + ADP(k) + AC4L, \text{ for } k = 0, \text{ or} \qquad (A\text{-}18)$$
$$AGCF(k) = AIN(k) + AAC4L + AAM(k), \text{ for } k = 1 \text{ to } 5$$

where

AGCF(k) = average gross cash flow cost in year k,
ACS(k) = cost of survey per station,
ADP(k) = average cost of the down payment per station,
AIN(k) = average interest cost in time period k per station,
AAM(k) = average amortization cost per station in year k,
ACL4 = average annualized cost of the lease portion of Fix 4, and
k = year index, 0 to 5.

The average down payment, interest, and amortization cost in each time period are obtained by using the corresponding values for the entire industry from Table A-14 to make calculations according to the following

$$AEX(0) = (AC4L/TNSF)+(TCS(0)/TNS), \text{ for } k = 0, \text{ or} \qquad (A-19)$$
$$AEX(k) = AC4L/TNSF, \text{ for } k = 1 \text{ to } 5,$$

where

AEX = average broadcast station expensed costs;
TNSF = total number of stations requiring a compliance measure, 1163; the number of stations shown in Table D-4 and in Table 15 may differ slightly from this as a result of roundoff error;
TNS = total number of FM stations, 4374; and
k = the year index, 0 to 5.

The effect of averaging the costs in this manner is to create a weighted average cost over all compliance measures for the average firm. These calculations are summarized in Table A-16. Table A-17 presents a pro forma generalized income statement for the average FM station. The variables used in this table are discussed below.

The average taxable operating income is given by

$$ATOI(0) = AOIA(0) + ADP(0), \text{ for } k = 0, \text{ or} \qquad (A-20)$$
$$ATOI(k) = AOIA(k) + AAM(k) - ADPN(k), \text{ for } k = 1 \text{ to } 5,$$

where

ATOI(k) = average taxable operating income in year k,
AOIA(k) = average operating income after compliance in year k,

Table A-16. A sample calculation of the effects on the average FM radio station of guidelines limiting public exposure to radiofrequency radiation is given for the 100 microwatts per sq. cm guidance at the medium cost level. The calculation of the average costs and tax deductions and credits is presented.

	Year					
	0	1	2	3	4	5
Parameter	Costs					
AEX[a]	$2,092	$92	$92	$92	$92	$92
ADP[b]	9,549					
AAM[b]		5,729	5,729	5,729	5,729	5,729
AIN[b]		2,865	2,292	1,719	1,146	573
AGCF[b]	11,641	8,686	8,113	7,540	6,968	6,395
AITC[b]	3,820					
ADPN		5,729	8,403	8,021	8,021	8,021

[a] AEX, year 1 = (AC4l/TNSF)+(TCS/TNS); AEX, year 2-6 = AC4L/TNSF

[b] The total value divided by TNSF

Table A-17. A sample calculation of the effects on the average FM radio station of guidelines limiting public exposure to radiofrequency radiation is given for the 100 microwatts per sq. cm guidance at the medium cost level. The net cost and effect on the net profit of the firm are presented.

	Year prior to guideline	Years of compliance expense					
Parameter		0	1	2	3	4	5
		Costs					
AOIB[a]	$139,400	$139,400	$139,400	$139,400	$139,400	$139,400	$139,400
AGCF[b]		-11,641	-8,686	-8,113	-7,540	-6,967	-6,394
AOIA[c]	139,400	127,759	130,714	131,287	131,860	132,432	133,005
AAM or ADP[b]		+9,549	+5,729	+5,729	+5,729	+5,729	+5,729
ADPN[b]			-5,729	-8,403	-8,021	-8,021	-8,021
ATOI	139,400	137,308	130,714	128,613	129,568	130,141	130,714
AGT		-42,912					
AITC[b]		+3,820					
ANT	-43,874	-39,092	-39,878	-39,912	-39,351	-39,615	-39,878
ANI	$95,526	$88,667	$90,835	$92,375	$92,508	$92,818	$93,127
		Net annual cost of compliance					
AGC		11,641	8,686	8,113	7,540	6,968	6,395
ATSA		-4,782	-3,996	-4,962	-4,523	-4,259	-3,996
NCC		$6,859	$4,691	$3,151	$3,018	$2,708	$2,399
ANCC	$3,804						
	Present value						
	Average	Cohort 1	Cohort 2	Cohort 3	Cohort 4	Cohort 5	
PV	$16,124	$19,334	$17,577	$15,979	$14,526	$13,206	

---

[a] Average operating income before taxes and compliance expenditures

[b] Refer to Table A-16

[c] Average operating income before taxes and after compliance expenditures

ADP(0) = average down payment in year 0,
AAM(k) = average amortization in year k,
ADPN(k) = average depreciation in year k, and
k = year index, 0 to 5.

In order to calculate tax savings, the following corporate tax rates are applied

Income tax bracket		Tax rate
ATOI		
Minimum	Maximum	
\$0	\$25,000	$TR_1 = 0.15$
\$25,001	\$50,000	$TR_2 = 0.18$
\$50,001	\$75,000	$TR_3 = 0.30$
\$75,001	\$100,000	$TR_4 = 0.40$
\$100,001	No maximum	$TR_5 = 0.46$

The average gross tax is given by

Taxable income bracket	Tax formula	
for $ATOI(k) > \$100{,}000$	$AGT(k) = \$25{,}000\,(TR_1+TR_2+TR_3+TR_4) + TR_5\,(ATOI(k) - \$100{,}000)$,	(A-21)
for $\$75{,}000 < ATOI(k) \leq \$100{,}000$	$AGT(k) = \$25{,}000\,(TR_1+TR_2+TR_3) + TR_4\,(ATOI(k) - \$75{,}000)$,	(A-22)
for $\$50{,}000 < ATOI(k) \leq \$75{,}000$	$AGT(k) = \$25{,}000\,(TR_1+TR_2) + TR_3\,(ATOI(k) - \$50{,}000)$,	(A-23)
for $\$25{,}000 < ATOI(k) \leq \$50{,}000$	$AGT(k) = \$25{,}000(TR_1) + TR_2\,(ATOI(k) - \$25{,}000)$, and	(A-24)
for $ATOI(k) \leq \$25{,}000$	$AGT(k) = ATOI(k)\,TR_1$,	(A-25)

where

AGT(k) = average gross tax in year k,
ATOI(k) = average taxable operating in year k, and
TR_j = tax rate for income bracket j.

The average gross tax is given in Table A-17 for each time period. The net tax, ANT(k), also given in A-17, is obtained by subtracting the average station investment tax credit from the gross tax in year 0.

The average net operating income after tax, ANIA(k), in year k is given by

$$\mathrm{ANIA}(k) = \mathrm{AOIA}(k) - \mathrm{ANT}(k), \text{ for } k = 0 \text{ to } 5 \tag{A-26}$$

where

AOIA(k) = average income after compliance and before taxes in year k, and
ANT(k) = average net tax in year k.

The average tax savings in year k, ATSA(k), is given by

$$\mathrm{ATSA}(k) = \mathrm{ANTB} - \mathrm{ANT}(k) \tag{A-27}$$

where

ANTB = average net tax in the year prior to guideline, and
ANT(k) = average net tax in year k.

The annual net cost of compliance, NCC(k), in year k is

$$\mathrm{NCC}(k) = \mathrm{AGCF}(k) - \mathrm{ATSA}(k)\ , \tag{A-28}$$

where

AGCF(k) = the average gross cash flow cost of compliance in year k, and
ATSA(k) = the average tax savings in year k.

The average annual net cost, ANCC, is calculated as follows

$$\mathrm{ANCC} = \sum_{k=1}^{6} \mathrm{NCC}(k)/6\ . \tag{A-29}$$

The present value, PV, is obtained from the expression

$$\mathrm{PV} = \sum_{k=1}^{5} \mathrm{NCC}(k)/1.1^{k-1}\ , \tag{A-30}$$

where

PV = present value, and
NCC(k) = annual net cost of compliance in year k.

However, this is the present value of the cost of compliance for a firm in the first cohort only. For a firm in the c^{th} cohort, the present value is given by the expression

$$PV(c) = \sum_{k=1}^{5} NCC(k)/(1.1)^{k-2+c} \tag{A-31}$$

where

PV(c) = the present value of the cost of compliance for a firm in the c^{th} cohort, and
NCC(k) = the annual net cost of compliance for the average firm.

The average present value, APV, is obtained by calculating the mean of the cohort present values

$$APV = \sum_{c=1}^{5} PV(c) \ /5 . \tag{A-32}$$

APPENDIX B

ECONOMIC METHODOLOGY: SAMPLE COMPUTATIONS AND ENGINEERING DATA FOR AM RADIO STATIONS

The object of this appendix is to present a detailed sample calculation of the total social, industry, and average AM radio broadcast station cost of complying with guidelines limiting public exposure to radiofrequency radiation. In Volume 1, the cost analysis is presented for eighteen field strength guidance levels at three cost levels. For the sample calculation, guidance level 6, 100 V/m, at the medium cost level is selected. The cost to society-at-large of the 100 V/m standard is expressed in terms of the total gross cost, the annual cash flow cost, and the present value. The cost to industry is expressed in terms of annual net cash flow cost over a period of ten years, the average cost over the 10-year period, and the present value of the 10-year cost stream. The cost to the average firm is presented in terms of the annual net cash flow cost, the average cost, and the average present value for the average profitable station.

REQUIRED DATA AND DEFINITIONS

AM radio stations can limit public exposure to radiofrequency radiation by restricting public access to broadcast towers. Table B-1 shows the radial distances from towers that the public would have to be excluded by fencing to meet the 18 guidance levels and the numbers of stations that would attain compliance by restricting access at the different distances. The distribution of stations requiring exclusion of the public at various distances for standard level 6 is given in column six of Table B-1. Other data and assumptions used in the sample computation are:

Medium cost of fence	$9/ft
Medium cost of gate	$600
Medium cost of survey to determine compliance	$2000
Total number of AM stations	4622
Fraction of stations assumed already fenced	1/3
Discount rate	0.10

- Stations are assumed to comply in five groups, one group a year for five years.
- For the industry and average firm analysis, one year of initial expenses, ordering and installing equipment, is assumed to be followed by five years of loan payments.

Table B-1. The distribution of AM radio stations is shown for radial distances that the signal strength exceeds one of 18 possible guidance levels. Stations whose signal exceeds a guidance level within 2 m of the tower are assumed to be in compliance because the base of most AM towers is already fenced. The power densities (in V/m) for the compliance levels are in parentheses. When no stations were included for an exclusion distance, the entry was left blank.

Distances, m		Compliance level																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		(10)	(366)	(447)	(70.8)	(86.6)	(100.0)	(141.3)	(173.2)	(200.0)	(223.9)	(244.9)	(264.6)	(281.8)	(300.0)	(316.2)	(446.7)	(708.0)	(1000.0)
< D ≤		Number of stations requiring exclusion of the public to the given distance from the antenna																	
0	2			1	76	129	431	909	1222	1241	2933	2960	3070	3075	3076	3098	3202	4251	4447
2	6																		
6	10		109	846	2680	2949	2673	2372	2947	2988	1440	1454	1362	1374	1375	1354	1305	368	173
10	14		1093	1932	533	834	1125	1087	299	259	135	135	119	166	164	167	112	2	2
14	18	70	1799	591	962	448	194	140	84	131	111	70	68	4	5	1	2	1	
18	22	85	248	261	138	105	79	58	67	1	2	2	2	2	1	1	1		
22	26	473	204	625	95	91	54	54	2	1		1	1	1	1	1			
26	30	382	684	130	59		48	1		1	1								
30	34	293	135	130	13	63	16	1	1										
34	38	1150	50	11	11	1	1												
38	42	446	142	6	53	1	1												
42	46	219	54	1	1	1													
46	50	43	5	22															
50	54	52	1	11	1														
54	58	65	8	38															
58	62	57	2	16															
62	66	7	1																
66	70	125	19																
70	74	508	34	1															
74	78	177	18																
78	82	116	15																
82	86	21																	
86	90	5																	
90	94	42	1																
94	98	9																	
98	102	104																	

Table B-1. (continued)

Distances, m		Compliance level																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		(10)	(366)	(447)	(70.8)	(86.6)	(100.0)	(141.3)	(173.2)	(200.0)	(223.9)	(244.9)	(264.6)	(281.8)	(300.0)	(316.2)	(446.7)	(708.0)	(1000.0)
< D ≤		Number of stations requiring exclusion of the public to the given distance from the antenna																	
102	106	9																	
106	110	12																	
110	114	1																	
∿	∿																		
154	158	1																	
158	162	1																	
∿	∿																		
210	214	7																	
∿	∿																		
218	222	1																	
222	226	65																	
226	230	11																	
230	234	18																	
234	238	7																	
∿	∿																		
242	246	28																	
∿	∿																		
254	258	2																	
258	262	1																	
∿	∿																		
266	270	9																	
TOTAL		4622	4622	4622	4622	4622	4622	4622	4622	4622	4622	4622	4622	4622	4622	4622	4622	4622	4622

- All stations are assumed to require an electronic survey whether or not they require modifications to comply with a guidance.
- A more detailed list of assumptions is given in Volume 1.

The cost of any guidance level studied can be computed at any of the three cost levels by using the cost data presented in Table B-2 and using the procedure described in this appendix.

SOCIAL COST

The cost to society-at-large includes the cost of carrying out a survey at all 4622 stations and the cost of installing a fence and access gate at those stations that do not comply with the standard. The total medium level cost of the compliance survey is the product of the number of stations, 4622, and the cost of compliance at each station, $2000, which results in a total cost of $9.244 million. The cost of the fence at a distance D is given by the expression

$$CFD(D) = [[(D \cdot 8 \cdot 3.28) - 20] \cdot CF + CG] \cdot NSF(D)\,, \qquad (B\text{-}1)$$

where

CFD(D) = cost of fence as a function of distance D, $;

D = radial distance from the tower that the signal is over-standard,m;

CF = cost of fence, $/ft;

CG = cost of gate, $;

NSF(D) = number of stations at distance D that require fencing in order to comply; NSF is derived by multiplying the entries in Table B-1 (at distances greater than 2 m) by one of three factors, 0.50 for the low cost, 0.6666 for the medium cost, and 0.85 for the high cost analysis, which represent three assumptions concerning the percentage of AM towers already adequately fenced; and

8 = the radius used to estimate the size of a square area to be fenced where the sides of the square are tangent to the circumference of the circle and the total length of the sides of the square = 8r.

Table B-2. Costs of compliance measures for AM radio broadcast stations.[a]

a. Survey of electromagnetic environment around tower to determine compliance with guideline and need for compliance measure.

	Cost per station		
	Low	Medium	High
Survey	$1,500	$2,000	$2,500

b. Compliance measure applicable to AM: fencing to positively keep the public out of areas exposed to over-standard levels of RF.

	Cost per station		
	Low	Medium	High
Fencing	$ 6/ft	$ 9/ft	$ 12/ft
Gate	$400	$600	$800

---

[a] From Table 10, Volume 1.

The total cost to society of the fencing required to comply with a given standard is given by

$$TCC = \sum_{i=1}^{n} CFD(D_i) , \qquad (B\text{-}2)$$

where

TCC = total cost of compliance measure to society-at-large,
$CFD(D_i)$ = cost of the fence at the ith distance D, and
n = total number of distance categories.

Table B-3 summarizes the results of applying these calculations to the information in Column 6 of Table B-1. Listed below is the total cost to society-at-large derived from the information discussed above and taken from Table B-3.

Total gross cost of compliance survey, TCS	$ 9,244,000
Total cost of compliance measures, TCC	7,910,491
Total gross cost of compliance, TGC	$17,154,491
Annual cash flow cost, ACFC	$ 3,430,898
Present value, PV	$14,306,384

Table B-3. An example of the calculation of the social cost of guidelines limiting public exposure to radiofrequency radiation from AM broadcast sources is given for compliance with the 100 V/m guidance at the medium-cost level.

Distance[a] (m)	Gross number of stations	Net number of stations that require fence[b]	Cost per station of fence and gate $	Total cost of fence and gate at distance D ($1000)
8	2673	1781	$2,309	$4,114,725
12	1125	750	3,254	2,440,196
16	194	129	4,199	542,959
20	79	53	5,143	270,848
24	54	36	6,088	219,140
28	48	32	7,032	225,017
32	16	11	7,977	85,081
36	1	1	8,922	5,947
40	1	1	9,866	6,577
		2,794		$7,910,491

[a] Mean of distance range in Table B-1.

[b] Second column times medium-cost, no-fence-needed adjustment, 0.6666.

Annual cash flow cost is the total gross cost divided by five years. The present value is calculated by discounting the annual cash flow cost at 10% for five years using the standard present value formula

$$PV = \sum_{k=1}^{5} ACFC/1.1^{k-1} . \qquad (B-3)$$

COST TO INDUSTRY

The cost to the AM broadcast industry of a guideline limiting public exposure to radiofrequency radiation includes the survey cost and the capital and finance cost of the fence. This section illustrates how the annual, total, and average cash flow and the present value of the net after-tax cost are computed for the 100 V/m guidance level. It is assumed that compliance costs are spread evenly among five cohorts of stations and that loan amortization and interest payments continue for five years after initial installation of the fence. The data requirements for this calculation are as follows,

o Total cost of survey, TCS	$9,244,000
o Total cost of fence, TCC	$7,910,491
o Tangible property, TP	$7,910,491
o Down payment on fence (25% of cost of fence), DP	$1,977,623
o Amount borrowed (75% of cost of fence), TLP	$5,932,868
o Interest rate	0.10
o Repayment period	5 years
o Annual principal payment, AM(k)	$1,186,574
o Effective tax rate	0.46
o Investment tax credit (10% of fence cost), ITC	0.10
o Expensed costs, year 0, (TCS), EX	$9,244,000

o Depreciation schedule

Year 1 0.15 (TP) = DPN(1)
Year 2 0.22 (TP) = DPN(2)
Year 3 0.21 (TP) = DPN(3)
Year 4 0.21 (TP) = DPN(4)
Year 5 0.21 (TP) = DPN(5)

Table B-4 provides a summary of the calculation of the annual cash flow over a period of five years based on the information provided above. The calculation considers the gross cash flow, tax shelter effect, net cash flow cost that result from expenses, loan down payment, loan amortization, interest payments, depreciation, and investment tax credit. The annual loan amortization is the amount borrowed divided by five. The interest is assumed to be paid on the remaining balance at the end of each year. The only non-depreciable expense considered is that of the survey, which takes place in the first year. The tax effect of expenses, interest, and depreciation is determined by multiplying each of these factors by the effective tax rate. The investment tax credit is based on the value of the tangible property, the fence, in the first year. The yearly gross cash flow is determined as follows:

$$\begin{aligned} GCF(0) &= DP(0) + TCS(0), \text{ for } k = 0, \text{ or} \\ GCF(k) &= AM(k) + IN(k), \text{ for } k = 1 \text{ to } 5, \end{aligned} \tag{B-4}$$

Table B-4. A sample calculation of the costs to the AM broadcast industry of guidelines limiting public exposure to radiofrequency radiation is given for compliance with the 100 V/m guidance at the medium-cost-level. Numbers are in millions of dollars.

	Year					
Parameter	0	1	2	3	4	5
	Industry costs					
EX	$9.244					
DP	1.977					
AM		$1.187	$1.187	$1.187	$1.187	$1.187
IN	___	0.593	0.475	0.356	0.237	0.119
GCF	11.222	1.780	1.661	1.543	1.424	1.305
TREX	4.252					
TRIN		0.273	0.218	0.164	0.109	0.055
TRDPN		0.545	0.801	0.764	0.764	0.764
ITC	0.791	___	___	___	___	___
TS	5.043	0.819	1.019	0.928	0.873	0.819
NCF	$6.178	$0.961	$0.642	$0.615	$0.551	$0.486
	Cohort costs					
CNCF	$1.236	$0.192	$0.128	$0.123	$0.110	$0.097

where

GCF(k) = gross cash flow cost in year k,
TCS(0) = total survey cost,
DP(0) = down payment on fence,
AM(k) = loan amortization in year k,
IN(k) = interest payment in year k, and
k = year index; 0 = year of compliance; 1-5 = continued compliance costs.

The yearly tax shelter effect is given by

$$TS(0) = TREX(0) + ITC(0), \text{ for } k = 0, \text{ or} \qquad (B\text{-}5)$$
$$TS(k) = TRIN(k) + TRDPN(k), \text{ for } k = 1 \text{ to } 5$$

where

TS(k) = tax shelter in year k,
TREX(k) = $0.46 \cdot Ex(k)$,
ITC = investment tax credit,
TRIN(k) = $0.46 \cdot IN(k)$,
TRDPN(k) = $0.46 \cdot DPN(k)$, and
k = year index, 0 to 5.

The net cash flow in year k, NCF(k) is the difference between the gross cash flow, GCF(k) and the tax shelter TS(k) and is given by

$$NCF(k) = GCF(k) - TS(k) . \qquad (B\text{-}6)$$

Table B-4 shows how costs are calculated for a cohort of AM broadcast stations using the variables discussed above for compliance with the 100 V/m guideline. The values in the last row of Table B-4 are shown for each cohort in Table B-5. The additional values shown in Tables B-4 and B-5 are computed as follows

$$CNCF(k) = NCF(k)/5 , \qquad (B\text{-}7)$$

where

CNCF(k) = the cohort net cash flow cost in year k, and
NCF(k) = the industry net cash flow cost in year k.

The six years of cohort costs, CNCF(k), for five cohorts are spread over a total of 10 years as shown in Table B-5. The total cost for each year, TNCF(k), is the sum of the individual CNCF(k)s for a given year; because the five cohorts' expenses occur over five years and the cohorts are staggered, the costs to industry are spread over a 10 year period. See Table B-5.

$$ANCF = \sum_{k=1}^{10} TNCF(k) /10. \qquad (B\text{-}8)$$

Table B-5. The cost to the AM broadcast industry of guidelines limiting public exposure to radiofrequency radiation is given for compliance with the 100 V/m guidance at the medium cost level. Numbers are in millions of dollars.

	Year									
Cohort	1	2	3	4	5	6	7	8	9	10
CNCF 1	$1.236	$0.192	$0.128	$0.123	$0.110	$0.097				
CNCF 2		1.236	0.192	0.128	0.123	0.110	$0.097			
CNCF 3			1.236	0.192	0.128	0.123	0.110	$0.097		
CNCF 4				1.236	0.192	0.128	0.123	0.110	$0.097	
CNCF 5					1.236	0.192	0.128	0.123	0.110	$0.097
TNCF	$1.236	$1.428	$1.556	$1.679	$1.789	$0.651	$0.459	$0.330	$0.207	$0.097
ANCF =	$0.943									
PV =	$7.275									

$$PV = \sum_{k=1}^{10} TNCF(k)/1.1^{k-1} , \qquad \text{(B-9)}$$

where

ANCF = the average annual net cash flow cost for the industry,

TNCF(k) = the total net cash flow cost for all five cohorts, and

PV = present value of the cost to industry.

EFFECTS ON THE AVERAGE PROFITABLE AM BROADCAST STATION

In this section, a sample calculation is presented of the cost of the 100 V/m guideline on the average profitable AM radio station. The objective is to determine the net annual cost of compliance over a six year period. From this, the present value of the net cost of compliance is determined. It is assumed that the average profitable AM station has a yearly gross income of $103,850 throughout the period of analysis.

The gross cash flow cost for the average station of compliance is given by the expression

$$AGCF(0) = ACS(0) + ADP, \text{ for } k = 0, \text{ or} \qquad (B-10)$$
$$AGCF(k) = AIN(k) + AAM(k), \text{ for } k = 1 \text{ to } 5$$

where

AGCF(k) = average gross cash flow cost in year k,
ACS = cost of survey per station,
ADP = average cost of the down payment per station,
AIN(k) = average interest cost in time period k per station,
AAM(k) = average amortization cost per station in year k, and
k = year index, 0 to 5.

The average down payment, interest, and amortization cost in each time period are obtained by using the corresponding values for the entire industry from Table B-4 and dividing by the number of stations required to install compliance measures, in the case of the 100 V/m, medium-cost-level, 2,794 stations (see Table B-3). In addition, the average station tax shelter from depreciation is obtained by dividing the industry value in Table B-4 by 2,794. The effect of averaging costs in this manner is to create a weighted average cost over all compliance measures for the average firm. These calculations are summarized in Table B-6.

The average taxable operating income is given by

$$ATOI(0) = AOIA(0) + ADP(0), \text{ for } k = 0 \text{ , or} \qquad (B-11)$$
$$ATOI(k) = AOIA(k) + AAM(k) - ADPN(k), \text{ for } k = 1 \text{ to } 5 \text{ ,}$$

where

ATOI(k) = average taxable operating income in year k,
AOIA(k) = average operating income after compliance in year k,
ADP(0) = average down payment in year 0,
AAM(k) = average amortization in year k,
ADPN(k) = average depreciation in year k, and
k = year index, 0 to 5.

Table B-6. A sample calculation of the costs to the average profitable AM broadcast station of guidelines limiting public exposure to radiofrequency radiation is given for compliance with the 100 V/m, medium-cost level.

		Years of compliance expense					
Parameter	Pre Guideline	0	1	2	3	4	5
AOIB	$103,850	$103,850	$103,850	$103,850	$103,850	$103,850	$103,850
AGCF		2,708	637	595	552	510	467
AOIA	103,850	101,142	103,213	103,255	103,298	103,340	103,383
ADP/AAM		708	425	425	425	425	425
ADPN			425	623	595	595	595
ATOI	103,850	101,850	103,213	103,057	103,128	103,170	103,213
AGT	27,521	26,601	27,228	27,156	27,189	27,208	27,228
AITC		283					
ANT	-27,521	-26,318	-27,228	-27,156	-27,189	-27,208	-27,228
ANIA	$76,329	$74,824	$75,985	$76,099	$76,109	$76,132	$76,155
		Net annual cost of compliance					
AGCF		$2,708	$637	$595	$552	$510	$467
ATSA		-1,203	-293	-365	-332	-313	-293
NCC		$1,505	$344	$230	$220	$197	$174
ANCC	$445						
	Present value						
	Average	Cohort 1	Cohort 2	Cohort 3	Cohort 4	Cohort 5	
PV	$2,014	$2,416	$2,196	$1,996	$1,815	$1,650	

In order to calculate tax savings the following corporate tax rates are applied.

Income tax bracket ATOI Minimum	Income tax bracket ATOI Maximum	Tax rate
\$0	\$25,000	$TR_1 = 0.15$
\$25,001	\$50,000	$TR_2 = 0.18$
\$50,001	\$75,000	$TR_3 = 0.30$
\$75,001	\$100,000	$TR_4 = 0.40$
\$100,001	No maximum	$TR_5 = 0.46$

Taxable income bracket	Tax formula	
for $ATOI(k) > \$100{,}000$	$AGT(k) = \$25{,}000\,(TR_1+TR_2+TR_3+TR_4) + TR_5\,(ATOI(k) - \$100{,}000)$,	(B-12)
for $\$75{,}000 < ATOI(k) \leq \$100{,}000$	$AGT(k) = \$25{,}000\,(TR_1+TR_2+TR_3) + TR_4\,(ATOI(k) - \$75{,}000)$,	(B-13)
for $\$50{,}000 < ATOI(k) \leq \$75{,}000$	$AGT(k) = \$25{,}000\,(TR_1+TR_2) + TR_3\,(ATOI(k) - \$50{,}000)$,	(B-14)
for $\$25{,}000 < ATOI(k) \leq \$50{,}000$	$AGT(k) = \$25{,}000(TR_1) + TR_2\,(ATOI(k) - \$25{,}000)$,	(B-15)
for $ATOI(k) \leq \$25{,}000$	$AGT(k) = ATOI(k)\ TR_1$,	(B-16)

where

AGT(k) = average gross tax in year k,

ATOI(k) = average taxable operating income in year k, and

TR_j = tax rate for income bracket j.

The average gross tax is given in Table B-6 for each time period. The net tax, ANT(k), also given in B-6, is obtained by subtracting the average station investment tax credit, \$659,000/2794 = \$236, from the gross tax in year 0.

The average net operating income after tax, ANIA(k), in year k is given by

$$ANIA(k) = AOIA(k) - ANT(k), \text{ for } k = 0,5 \qquad (B\text{-}17)$$

where

AOIA(k) = average income after compliance and before taxes in year k, and
ANT(k) = average net tax in year k.

The average tax savings in year k, ATSA(k), is given by

$$ATSA(k) = ANTB - ANT(k)\ , \qquad (B\text{-}18)$$

where

ANTB = average net tax in the year prior to the guideline, and
ANT(k) = average net tax in year k.

The annual net cost of compliance, NCC(k), in year k is

$$NCC(k) = AGCF(k) - ATSA(k)\ , \qquad (B\text{-}19)$$

where

AGCF(k) = the average gross cash flow cost of compliance in year k, and
ATSA(k) = the average tax savings in year k.

The average annual net cost, ANCC, is the sum of the year net costs, $2,670, divided by six years, or $445 average cost per year.

The present value, PV, is obtained from the general expression

$$PV = \sum_{k=1}^{5} NCC(k)/(1.1)^{k-1}\ , \qquad (B\text{-}20)$$

where

PV = present value, and
NCC(k) = annual net cost of compliance in year k.

However, this is the present value of the cost of compliance for a firm the first cohort only. For a firm in the c^{th} cohort the present value is given by the expression

$$PV(c) \sum_{k=1}^{5} ANCC(k)/(1.1)^{k-2+c}, \qquad (B-21)$$

where

PV(c) = the present value of the cost of compliance for a firm in the c^{th} cohort, and

NCC(k) = the annual net cost of compliance for the average firm.

The average present value, APV, is obtained by calculating the mean of the cohort present values

$$APV = \left[\sum_{c=1}^{5} PV(c)\right]/5. \qquad (B-22)$$

APPENDIX C

ECONOMIC METHODOLOGY: SAMPLE COMPUTATIONS AND ENGINEERING DATA FOR TV BROADCAST STATIONS

The object of this appendix is to provide a detailed sample calculation of social, industry, and average TV broadcast station cost of complying with guidelines limiting exposure to nonionizing radiation from TV transmitters. In Volume 1, the cost analysis is presented for eighteen power densities at three cost levels. For the sample computation here, a single guidance level 6 -- 100 $\mu W/cm^2$ -- at the medium-cost level is selected. The first step in the analysis is to determine the minimum cost measure that will achieve compliance for each TV station. Then, the total cost for the whole industry is determined. From this, the cost to society-at-large, to industry, and to the average TV broadcast station are derived. The cost to society is expressed in terms of the total gross cost, the annual cash flow cost, and the present value. Cost to industry is expressed in terms of the total industry average, annual net cash flow cost over a period of ten years, and the present value. The cost to the average firm is expressed in terms of the average and annual net cash flow cost and the average present value for the average profitable station.

MINIMUM COST OF COMPLIANCE

The minimum-cost analysis for each station requires data in Table C-1. Briefly, Table C-1 contains 9 columns of information on every VHF-TV and UHF-TV station. The first column is the EPA-designated station number (SN); the second, the height of the current antenna in feet (CTH); the third, the height of a new tower required to achieve reduction in power density to the required level using the existing antenna (EATH); the fourth, the height of a new tower required if a new antenna is installed that is designed for reduced downward radiation (NATH); the fifth, whether or not a new, low-downward radiation antenna would achieve compliance on the existing tower (NACT); the sixth, the type of antenna (TYPE); the seventh, the channel (CHNL); the eighth, the effective radiated power (ERP); and the ninth, the power density level (PD).

The cost of compliance includes the cost of a survey for every TV station and the cost of modifications at those stations that require a "fix" to bring them into compliance. These components are shown in Table C-2. In the medium cost scenario, the cost of a survey is $2000 per station. There are 1080 TV stations (UHF and VHF) in the U.S. Thus, the total survey cost is $2000 x 1080 or $2.16 million. However, there are only

TABLE C-1 AN ANALYSIS OF THE REQUIREMENTS FOR COMPLIANCE WITHGUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM VHF-TV AND UHF-TV SOURCES IS GIVEN FOR 18 POWER DENSITY LEVELS. (SOURCE: EPA, ORP, LAS VEGAS, NV).

STATION NUMBER (SN)	CURRENT TOWER HEIGHT (CTH)	EXISTING ANTENNA TOWER HEIGHT (EATH)	NEW ANTENNA TOWER HEIGHT (NATH)	NEW ANTENNA CURRENT TOWER (NACT)	TYPE	CHNL	EFFECTIVE RADIATION POWER (ERP)	POWER DENSITY (PD)
1	30.0	1072.7	421.4	NO	VHF	11	98.80	1
2	30.0	294.0	115.5	NO	VHF	13	7.42	1
3	30.0	228.4	89.7	NO	VHF	3	4.48	1
4	30.0	201.1	79.0	NO	VHF	13	3.47	1
5	30.0	468.4	184.0	NO	VHF	10	18.84	1
6	30.0	455.6	179.0	NO	VHF	7	17.82	1
7	30.0	473.4	186.0	NO	VHF	12	19.24	1
8	30.0	1126.1	563.0	NO	UHF	53	352.80	1
9	30.0	115.0	45.2	NO	VHF	11	1.14	1
10	30.0	821.9	322.9	NO	VHF	9	58.00	1
11	30.0	676.9	265.9	NO	VHF	10	39.34	1
12	30.0	740.5	290.9	NO	VHF	10	47.08	1
13	30.0	311.6	122.4	NO	VHF	3	8.34	1
14	30.0	231.5	90.9	NO	VHF	13	4.60	1
15	30.0	944.9	472.5	NO	UHF	51	248.40	1
16	40.0	937.1	368.1	NO	VHF	11	75.40	1
17	42.0	347.3	136.5	NO	VHF	4	10.36	1
18	42.0	146.2	57.4	NO	VHF	10	1.84	1
19	49.0	598.1	235.0	NO	VHF	2	30.72	1
20	50.0	1060.7	416.7	NO	VHF	8	96.60	1
21	50.0	831.7	326.7	NO	VHF	8	59.40	1
22	56.0	892.5	350.6	NO	VHF	7	68.40	1
23	56.0	1042.7	521.4	NO	UHF	33	302.50	1
24	59.0	305.2	119.9	NO	VHF	2	8.00	1
25	66.0	121.0	0.	YES	UHF	65	4.08	1
26	66.0	511.2	200.8	NO	VHF	3	22.44	1
27	67.0	895.8	351.9	NO	VHF	12	68.90	1
28	69.0	818.3	321.5	NO	VHF	12	57.50	1
29	70.0	648.6	254.8	NO	VHF	8	36.12	1
30	71.0	889.9	349.6	NO	VHF	8	68.00	1
31	71.0	1273.7	500.3	NO	VHF	12	139.30	1
32	73.0	440.7	173.1	NO	VHF	5	16.68	1
33	73.0	721.0	283.2	NO	VHF	13	44.64	1
34	74.0	1296.8	509.4	NO	VHF	12	144.40	1
35	76.0	1483.2	582.7	NO	VHF	7	188.90	1
36	79.0	1608.7	804.4	NO	UHF	57	720.00	1
37	80.0	110.5	0.	YES	UHF	24	3.40	1
38	81.0	561.0	220.4	NO	VHF	9	27.02	1
39	81.0	456.1	179.2	NO	VHF	4	17.86	1
40	83.0	1403.7	551.4	NO	VHF	13	169.20	1
41	84.0	919.5	459.7	NO	UHF	36	235.20	1
42	84.0	915.1	359.5	NO	VHF	10	71.90	1
43	85.0	1349.6	530.2	NO	VHF	10	156.40	1
44	89.0	835.9	328.4	NO	VHF	5	60.00	1
45	90.0	712.4	279.9	NO	VHF	5	43.58	1
46	90.0	786.7	393.4	NO	UHF	42	172.20	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
47	90.0	612.6	240.6	NO	VHF	5	32.22	1
48	91.0	319.0	159.5	NO	UHF	20	28.32	1
49	92.0	537.2	211.0	NO	VHF	4	24.78	1
50	95.0	438.4	172.2	NO	VHF	11	16.50	1
51	97.0	1061.4	530.7	NO	UHF	47	313.40	1
52	97.0	1322.8	661.4	NO	UHF	54	486.00	1
53	99.0	2240.8	1120.4	NO	UHF	51	1097.00	1
54	100.0	619.0	243.2	NO	VHF	2	32.90	1
55	101.0	491.9	193.2	NO	VHF	2	20.78	1
56	102.0	1522.6	761.3	NO	UHF	20	645.00	1
57	103.0	1418.7	709.4	NO	UHF	30	560.00	1
58	103.0	579.1	227.5	NO	VHF	4	28.80	1
59	104.0	2209.9	1105.0	NO	UHF	18	1358.70	1
60	106.0	1337.0	525.2	NO	VHF	10	153.50	1
61	106.0	1467.0	733.5	NO	UHF	29	598.70	1
62	106.0	825.4	324.2	NO	VHF	12	58.50	1
63	107.0	1422.7	558.9	NO	VHF	8	173.80	1
64	107.0	670.8	263.5	NO	VHF	13	38.64	1
65	108.0	322.3	126.6	NO	VHF	5	8.92	1
66	109.0	2006.4	1003.2	NO	UHF	31	1120.00	1
67	109.0	176.4	0.	YES	UHF	21	8.66	1
68	110.0	1485.6	583.6	NO	VHF	8	189.50	1
69	112.0	2571.7	1285.8	NO	UHF	40	1840.00	1
70	112.0	1105.3	552.7	NO	UHF	21	339.90	1
71	113.0	1687.2	843.6	NO	UHF	22	792.00	1
72	117.0	764.3	382.1	NO	UHF	50	162.50	1
73	117.0	663.5	260.6	NO	VHF	13	37.80	1
74	119.0	973.0	486.5	NO	UHF	23	263.40	1
75	120.0	2079.4	1039.7	NO	UHF	21	1203.00	1
76	121.0	1262.7	631.4	NO	UHF	15	443.60	1
77	123.0	1013.0	506.5	NO	UHF	32	285.50	1
78	123.0	178.9	0.	YES	VHF	4	2.75	1
79	125.0	672.4	264.1	NO	VHF	6	38.82	1
80	126.0	1008.6	504.3	NO	UHF	29	283.00	1
81	129.0	355.5	177.7	NO	UHF	21	35.16	1
82	129.0	1063.9	418.0	NO	VHF	9	97.20	1
83	130.0	259.9	0.	YES	VHF	11	5.80	1
84	132.0	833.1	327.3	NO	VHF	13	59.60	1
85	133.0	397.7	156.2	NO	VHF	4	13.58	1
86	134.0	1005.4	395.0	NO	VHF	7	86.80	1
87	135.0	550.3	216.2	NO	VHF	6	26.00	1
88	135.0	1077.5	538.7	NO	UHF	35	323.00	1
89	135.0	648.6	254.8	NO	VHF	10	36.12	1
90	137.0	150.5	0.	YES	UHF	40	6.30	1
91	138.0	1052.9	526.4	NO	UHF	21	308.40	1
92	140.0	3202.3	1601.1	NO	UHF	39	2853.00	1
93	140.0	1863.4	931.7	NO	UHF	58	966.00	1
94	140.0	959.2	376.8	NO	VHF	12	79.00	1
95	141.0	1669.0	834.5	NO	UHF	60	775.00	1
96	141.0	356.9	0.	YES	VHF	4	10.94	1
97	142.0	455.3	178.9	NO	VHF	6	17.80	1
98	143.0	1948.2	974.1	NO	UHF	23	1056.00	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
99	144.0	2279.0	1139.5	NO	UHF	38	1445.00	1
100	149.0	835.9	328.4	NO	VHF	4	60.00	1
101	150.0	1192.1	596.1	NO	UHF	34	395.40	1
102	150.0	442.1	173.7	NO	VHF	2	16.78	1
103	151.0	549.6	215.9	NO	VHF	3	25.94	1
104	151.0	795.9	312.7	NO	VHF	3	54.40	1
105	152.0	277.1	0.	YES	UHF	52	21.36	1
106	153.0	1109.0	435.6	NO	VHF	7	105.60	1
107	155.0	1421.0	710.5	NO	UHF	16	561.80	1
108	157.0	1305.3	512.8	NO	VHF	9	146.30	1
109	158.0	1220.9	479.6	NO	VHF	11	128.00	1
110	159.0	2164.5	1082.2	NO	UHF	52	1303.40	1
111	160.0	800.3	314.4	NO	VHF	6	55.00	1
112	160.0	1161.6	580.8	NO	UHF	40	375.40	1
113	160.0	648.6	254.8	NO	VHF	6	36.12	1
114	161.0	1592.2	796.1	NO	UHF	14	705.30	1
115	162.0	2217.0	1108.5	NO	UHF	36	1367.50	1
116	163.0	781.9	307.2	NO	VHF	6	52.50	1
117	167.0	1003.1	394.1	NO	VHF	11	86.40	1
118	167.0	1051.3	413.0	NO	VHF	7	94.90	1
119	167.0	876.0	344.1	NO	VHF	9	65.90	1
120	168.0	1039.1	519.6	NO	UHF	42	300.40	1
121	169.0	487.4	191.5	NO	VHF	5	20.40	1
122	170.0	1001.9	393.6	NO	VHF	13	86.20	1
123	170.0	429.2	0.	YES	VHF	9	15.82	1
124	172.0	2149.1	1074.6	NO	UHF	22	1285.00	1
125	173.0	1771.7	885.9	NO	UHF	23	873.30	1
126	174.0	1020.4	400.8	NO	VHF	12	89.40	1
127	175.0	200.1	0.	YES	UHF	55	11.14	1
128	178.0	800.3	314.4	NO	VHF	3	55.00	1
129	178.0	1289.6	506.6	NO	VHF	8	142.80	1
130	180.0	849.7	333.8	NO	VHF	7	62.00	1
131	182.0	1705.2	852.6	NO	UHF	46	809.00	1
132	182.0	1356.5	532.9	NO	VHF	10	158.00	1
133	183.0	564.7	221.8	NO	VHF	2	27.38	1
134	184.0	1410.8	554.2	NO	VHF	7	170.90	1
135	185.0	1647.3	823.7	NO	UHF	19	755.00	1
136	185.0	1422.7	558.9	NO	VHF	9	173.80	1
137	187.0	759.6	298.4	NO	VHF	7	49.54	1
138	187.5	1092.6	546.3	NO	UHF	25	332.10	1
139	188.0	715.2	357.6	NO	UHF	15	142.30	1
140	188.0	255.6	0.	YES	VHF	9	5.61	1
141	190.0	540.0	212.1	NO	VHF	5	25.04	1
142	190.0	1914.7	957.4	NO	UHF	29	1020.00	1
143	191.0	1087.0	543.5	NO	UHF	15	328.70	1
144	194.0	1420.2	557.9	NO	VHF	10	173.20	1
145	195.0	1506.5	753.2	NO	UHF	14	631.40	1
146	195.0	1247.0	623.5	NO	UHF	40	432.60	1
147	198.0	1356.5	532.9	NO	VHF	13	158.00	1
148	198.0	1421.0	558.2	NO	VHF	10	173.40	1
149	199.0	835.9	328.4	NO	VHF	3	60.00	1
150	200.0	1116.5	558.2	NO	UHF	47	3[illegible]6.80	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
151	201.0	1485.9	583.7	NO	VHF	8	189.60	1
152	203.0	1414.1	555.5	NO	VHF	9	171.70	1
153	203.0	1237.5	486.1	NO	VHF	7	131.50	1
154	205.0	1131.8	444.6	NO	VHF	10	110.00	1
155	205.0	1558.8	779.4	NO	UHF	18	676.00	1
156	207.0	1139.5	447.6	NO	VHF	10	111.50	1
157	207.0	817.6	321.2	NO	VHF	3	57.40	1
158	208.0	896.7	448.3	NO	UHF	19	223.70	1
159	208.0	1356.5	532.9	NO	VHF	9	158.00	1
160	211.0	2997.6	1498.8	NO	UHF	20	2500.00	1
161	212.0	2387.9	1194.0	NO	UHF	26	1586.40	1
162	213.0	444.7	0.	YES	VHF	2	16.98	1
163	214.0	1371.4	538.7	NO	VHF	8	161.50	1
164	214.0	1485.6	583.6	NO	VHF	8	189.50	1
165	214.0	1383.7	543.6	NO	VHF	12	164.40	1
166	214.0	2223.1	1111.6	NO	UHF	50	1375.00	1
167	215.0	1433.3	563.0	NO	VHF	7	176.40	1
168	215.0	2149.1	1074.6	NO	UHF	14	1285.00	1
169	219.0	2326.3	1163.2	NO	UHF	26	1505.60	1
170	219.0	1325.2	520.6	NO	VHF	13	150.80	1
171	221.0	695.7	273.3	NO	VHF	11	41.56	1
172	222.0	652.0	256.1	NO	VHF	8	36.50	1
173	222.0	2383.8	1191.9	NO	UHF	47	1581.00	1
174	225.0	1558.5	779.3	NO	UHF	17	675.80	1
175	225.0	1141.9	571.0	NO	UHF	15	362.80	1
176	226.0	1144.6	449.6	NO	VHF	13	112.50	1
177	226.0	1315.5	516.8	NO	VHF	7	148.60	1
178	230.0	842.2	330.8	NO	VHF	10	60.90	1
179	231.0	2282.9	1141.5	NO	UHF	17	1450.00	1
180	232.0	2333.1	1166.5	NO	UHF	30	1514.40	1
181	234.0	763.1	299.8	NO	VHF	2	50.00	1
182	235.0	843.8	421.9	NO	UHF	67	198.10	1
183	235.0	605.5	237.9	NO	VHF	4	31.48	1
184	242.0	2028.7	1014.3	NO	UHF	33	1145.00	1
185	242.0	1386.7	693.4	NO	UHF	15	535.00	1
186	248.0	2997.6	1498.8	NO	UHF	17	2500.00	1
187	249.0	1419.0	557.4	NO	VHF	11	172.90	1
188	250.0	369.1	0.	YES	VHF	3	11.70	1
189	250.0	763.1	299.8	NO	VHF	3	50.00	1
190	251.0	612.6	306.3	NO	UHF	18	104.40	1
191	253.5	281.8	0.	YES	VHF	3	6.82	1
192	256.0	1227.8	613.9	NO	UHF	45	419.40	1
193	257.0	311.5	0.	YES	UHF	28	27.00	1
194	261.0	1522.6	761.3	NO	UHF	29	645.00	1
195	264.0	750.1	294.7	NO	VHF	6	48.32	1
196	269.0	1028.3	404.0	NO	VHF	13	90.80	1
197	269.0	539.6	269.8	NO	UHF	54	81.00	1
198	269.0	1063.7	531.9	NO	UHF	22	314.80	1
199	276.0	1427.2	560.6	NO	VHF	8	174.90	1
200	276.0	1391.2	546.5	NO	VHF	10	166.20	1
201	277.0	464.9	0.	YES	VHF	13	18.56	1
202	280.0	1420.2	557.9	NO	VHF	12	173.20	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
203	281.0	1279.2	502.5	NO	VHF	11	140.50	1
204	281.0	1688.3	844.1	NO	UHF	24	793.00	1
205	282.0	2820.3	1410.2	NO	UHF	48	2213.00	1
206	284.0	2226.3	1113.2	NO	UHF	21	1379.00	1
207	289.0	803.5	401.7	NO	UHF	28	179.60	1
208	290.0	1064.9	532.5	NO	UHF	18	315.50	1
209	290.5	1424.7	559.7	NO	VHF	13	174.30	1
210	293.0	368.5	0.	YES	VHF	5	11.66	1
211	298.5	1649.5	824.8	NO	UHF	33	757.00	1
212	299.0	1166.2	583.1	NO	UHF	25	378.40	1
213	299.0	1349.6	530.2	NO	VHF	12	156.40	1
214	300.0	1403.3	551.3	NO	VHF	9	169.10	1
215	303.0	1125.8	562.9	NO	UHF	61	352.60	1
216	305.0	1506.0	753.0	NO	UHF	31	631.00	1
217	305.0	1486.8	743.4	NO	UHF	21	615.00	1
218	306.0	1863.4	931.7	NO	UHF	68	966.00	1
219	306.0	2740.3	1370.1	NO	UHF	19	2089.10	1
220	310.0	1125.8	562.9	NO	UHF	52	352.60	1
221	310.7	783.5	391.8	NO	UHF	62	170.80	1
222	311.0	1010.9	505.4	NO	UHF	19	284.30	1
223	312.0	663.0	331.5	NO	UHF	14	122.30	1
224	315.0	2093.8	1046.9	NO	UHF	35	1219.70	1
225	317.0	612.2	0.	YES	VHF	8	32.18	1
226	320.0	2176.5	1088.3	NO	UHF	53	1318.00	1
227	321.0	430.6	0.	YES	VHF	11	15.92	1
228	323.0	2094.1	1047.0	NO	UHF	28	1220.00	1
229	323.0	1169.6	584.8	NO	UHF	26	380.60	1
230	324.0	493.4	0.	YES	VHF	4	20.90	1
231	325.0	763.1	0.	YES	VHF	2	50.00	1
232	326.0	809.3	404.6	NO	UHF	14	182.20	1
233	327.0	766.9	0.	YES	VHF	6	50.50	1
234	328.0	1140.7	570.3	NO	UHF	24	362.00	1
235	333.0	1356.5	532.9	NO	VHF	13	158.00	1
236	333.0	800.3	0.	YES	VHF	5	55.00	1
237	333.0	764.6	0.	YES	VHF	2	50.20	1
238	334.0	1132.5	566.2	NO	UHF	49	356.80	1
239	350.0	1458.3	572.9	NO	VHF	8	182.60	1
240	355.0	970.4	485.2	NO	UHF	26	262.00	1
241	359.0	1933.4	966.7	NO	UHF	22	1040.00	1
242	360.0	1702.1	851.0	NO	UHF	43	806.00	1
243	360.0	488.5	0.	YES	UHF	25	66.40	1
244	361.0	1615.5	807.8	NO	UHF	58	726.10	1
245	363.0	1194.6	597.3	NO	UHF	66	397.00	1
246	366.0	1147.7	450.8	NO	VHF	9	113.10	1
247	366.0	1485.6	583.6	NO	VHF	11	189.50	1
248	366.0	1016.4	399.3	NO	VHF	11	88.70	1
249	370.0	1677.1	838.5	NO	UHF	31	782.50	1
250	377.0	583.4	0.	YES	UHF	40	94.70	1
251	380.0	1474.5	579.3	NO	VHF	9	186.70	1
252	386.0	1191.8	595.9	NO	UHF	41	395.20	1
253	387.0	1314.1	657.0	NO	UHF	20	480.40	1
254	390.0	835.9	0.	YES	VHF	2	60.00	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
255	395.0	711.9	0.	YES	UHF	15	141.00	1
256	397.0	518.9	0.	YES	VHF	9	23.12	1
257	398.0	641.5	0.	YES	UHF	57	114.50	1
258	402.0	594.4	0.	YES	VHF	5	30.34	1
259	403.0	913.1	0.	YES	VHF	13	71.60	1
260	406.0	927.4	463.7	NO	UHF	57	239.30	1
261	407.0	1732.0	866.0	NO	UHF	40	834.60	1
262	407.9	801.0	0.	YES	VHF	4	55.10	1
263	408.0	894.7	447.3	NO	UHF	17	222.70	1
264	408.0	1470.7	735.4	NO	UHF	15	601.80	1
265	409.0	778.2	0.	YES	VHF	6	52.00	1
266	414.0	2803.1	1401.5	NO	UHF	67	2186.00	1
267	414.0	1102.2	551.1	NO	UHF	25	338.00	1
268	415.0	1211.3	605.6	NO	UHF	24	408.20	1
269	416.0	571.2	0.	YES	VHF	2	28.02	1
270	420.0	1777.7	888.8	NO	UHF	50	879.20	1
271	423.0	1610.9	805.5	NO	UHF	66	722.00	1
272	425.0	1356.5	532.9	NO	VHF	7	158.00	1
273	429.0	1485.6	583.6	NO	VHF	11	189.50	1
274	430.0	1485.6	583.6	NO	VHF	13	189.50	1
275	430.0	1379.9	542.1	NO	VHF	10	163.50	1
276	430.0	1485.9	583.7	NO	VHF	11	189.60	1
277	432.0	612.6	0.	YES	VHF	3	32.22	1
278	433.0	784.9	0.	YES	UHF	49	171.40	1
279	433.0	763.1	0.	YES	VHF	5	50.00	1
280	433.0	1323.5	519.9	NO	VHF	9	150.40	1
281	437.0	1006.2	503.1	NO	UHF	53	281.70	1
282	445.0	835.9	0.	YES	VHF	4	60.00	1
283	446.0	546.9	0.	YES	VHF	4	25.68	1
284	447.0	767.3	0.	YES	UHF	14	163.80	1
285	448.0	1504.8	752.4	NO	UHF	33	630.00	1
286	449.0	835.9	0.	YES	VHF	2	60.00	1
287	450.0	613.2	0.	YES	UHF	49	104.60	1
288	450.0	763.1	0.	YES	VHF	4	50.00	1
289	450.0	835.9	0.	YES	VHF	2	60.00	1
290	455.0	627.4	0.	YES	UHF	69	109.50	1
291	455.0	835.9	0.	YES	VHF	5	60.00	1
292	456.0	1522.6	761.3	NO	UHF	19	645.00	1
293	457.0	677.2	0.	YES	UHF	42	127.60	1
294	459.0	1180.0	590.0	NO	UHF	40	387.40	1
295	459.0	2328.9	1164.5	NO	UHF	24	1509.00	1
296	460.0	1261.0	630.5	NO	UHF	40	442.40	1
297	460.0	1125.5	562.7	NO	UHF	31	352.40	1
298	460.0	2149.1	1074.6	NO	UHF	27	1285.00	1
299	460.0	1468.5	734.3	NO	UHF	21	600.00	1
300	460.0	2222.3	1111.2	NO	UHF	16	1374.00	1
301	460.0	1387.5	545.0	NO	VHF	8	165.30	1
302	466.0	664.4	0.	YES	UHF	18	122.80	1
303	466.0	1437.1	718.6	NO	UHF	18	574.60	1
304	467.0	1085.8	542.9	NO	UHF	39	328.00	1
305	469.0	2098.4	1049.2	NO	UHF	50	1225.00	1
306	473.0	1356.5	532.9	NO	VHF	9	158.00	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
307	475.0	529.6	0.	YES	VHF	5	24.08	1
308	478.0	2309.6	1154.8	NO	UHF	24	1484.00	1
309	478.0	1009.6	504.8	NO	UHF	29	283.60	1
310	480.0	1486.8	743.4	NO	UHF	26	615.00	1
311	489.0	835.9	0.	YES	VHF	3	60.00	1
312	490.0	2737.6	1368.8	NO	UHF	22	2085.00	1
313	490.0	835.9	0.	YES	VHF	5	60.00	1
314	490.0	1624.3	812.1	NO	UHF	15	734.00	1
315	492.0	791.5	0.	YES	VHF	3	53.80	1
316	498.0	1028.9	514.4	NO	UHF	36	294.50	1
317	500.0	809.0	0.	YES	VHF	4	56.20	1
318	500.0	1485.2	583.4	NO	VHF	9	189.40	1
319	501.0	971.7	0.	YES	UHF	36	262.70	1
320	503.0	1450.1	725.0	NO	UHF	42	585.00	1
321	504.0	1356.5	532.9	NO	VHF	7	158.00	1
322	504.0	1421.0	558.2	NO	VHF	7	173.40	1
323	505.0	690.4	0.	YES	UHF	34	132.60	1
324	506.0	790.1	0.	YES	VHF	5	53.60	1
325	506.0	1421.0	558.2	NO	VHF	7	173.40	1
326	507.0	763.1	0.	YES	VHF	3	50.00	1
327	507.0	661.1	0.	YES	UHF	14	121.60	1
328	508.0	1357.8	533.4	NO	VHF	9	158.30	1
329	508.0	751.7	0.	YES	UHF	49	157.20	1
330	508.0	1918.5	959.2	NO	UHF	31	1024.00	1
331	508.0	754.6	0.	YES	VHF	12	48.90	1
332	509.0	1118.1	559.0	NO	UHF	34	347.80	1
333	509.0	1050.8	525.4	NO	UHF	35	307.20	1
334	510.0	790.6	0.	YES	UHF	15	173.90	1
335	510.0	1571.4	785.7	NO	UHF	68	687.00	1
336	510.0	893.3	0.	YES	UHF	15	222.00	1
337	511.0	1201.2	600.6	NO	UHF	28	401.40	1
338	512.0	763.1	0.	YES	VHF	3	50.00	1
339	513.0	641.5	0.	YES	UHF	26	114.50	1
340	513.0	1498.8	749.4	NO	UHF	19	625.00	1
341	515.0	1424.7	559.7	NO	VHF	8	174.30	1
342	515.0	1189.7	594.9	NO	UHF	26	393.80	1
343	516.0	763.1	0.	YES	VHF	2	50.00	1
344	516.0	1233.3	616.7	NO	UHF	29	423.20	1
345	517.0	1386.2	544.5	NO	VHF	9	165.00	1
346	520.0	1831.3	915.6	NO	UHF	22	933.00	1
347	520.0	801.0	0.	YES	VHF	5	55.10	1
348	521.0	559.2	0.	YES	UHF	19	87.00	1
349	523.0	866.7	0.	YES	VHF	12	64.50	1
350	525.0	1350.5	530.5	NO	VHF	13	156.60	1
351	525.0	1485.9	583.7	NO	VHF	7	189.60	1
352	526.0	763.1	0.	YES	VHF	4	50.00	1
353	529.0	1485.9	583.7	NO	VHF	7	189.60	1
354	530.0	1485.6	583.6	NO	VHF	13	189.50	1
355	535.0	1356.5	0.	YES	VHF	11	158.00	1
356	536.0	772.2	0.	YES	VHF	6	51.20	1
357	540.0	835.9	0.	YES	VHF	4	60.00	1
358	544.0	835.9	0.	YES	VHF	3	60.00	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
359	550.0	835.9	0.	YES	VHF	3	60.00	1
360	551.0	594.4	0.	YES	VHF	3	30.34	1
361	554.0	835.9	0.	YES	VHF	3	60.00	1
362	556.0	1236.1	0.	YES	VHF	7	131.20	1
363	557.0	1214.5	607.3	NO	UHF	25	410.40	1
364	559.0	1591.9	795.9	NO	UHF	47	705.00	1
365	559.0	800.3	0.	YES	VHF	2	55.00	1
366	560.0	753.6	0.	YES	UHF	16	158.00	1
367	560.0	847.9	0.	YES	UHF	19	200.00	1
368	562.0	1211.6	605.8	NO	UHF	52	408.40	1
369	564.0	777.1	0.	YES	UHF	41	168.00	1
370	565.0	1373.7	686.8	NO	UHF	39	525.00	1
371	565.0	2273.5	1136.7	NO	UHF	25	1438.00	1
372	565.0	1210.1	605.0	NO	UHF	38	407.40	1
373	565.0	1180.0	590.0	NO	UHF	35	387.40	1
374	567.0	1407.5	0.	YES	VHF	11	170.10	1
375	569.0	2075.3	1037.6	NO	UHF	27	1198.20	1
376	569.0	817.6	0.	YES	VHF	6	57.40	1
377	570.0	1485.2	583.4	NO	VHF	10	189.40	1
378	570.0	1356.5	0.	YES	VHF	9	158.00	1
379	570.0	1425.1	0.	YES	VHF	7	174.40	1
380	571.0	763.1	0.	YES	VHF	2	50.00	1
381	571.0	1379.9	0.	YES	VHF	12	163.50	1
382	574.0	1173.9	587.0	NO	UHF	53	383.40	1
383	575.0	1485.9	583.7	NO	VHF	7	189.60	1
384	577.0	1485.2	583.4	NO	VHF	9	189.40	1
385	578.0	2509.7	1254.9	NO	UHF	22	1752.40	1
386	578.0	763.1	0.	YES	VHF	4	50.00	1
387	579.0	1485.2	583.4	NO	VHF	7	189.40	1
388	581.0	1260.3	0.	YES	VHF	8	136.40	1
389	582.0	1391.2	0.	YES	VHF	13	166.20	1
390	588.0	763.1	0.	YES	VHF	5	50.00	1
391	595.0	1231.4	0.	YES	VHF	11	130.20	1
392	598.0	1402.4	701.2	NO	UHF	33	547.20	1
393	602.0	1339.9	670.0	NO	UHF	57	499.50	1
394	604.0	684.1	0.	YES	UHF	30	130.20	1
395	604.0	1356.5	0.	YES	VHF	10	158.00	1
396	604.0	1182.2	0.	YES	VHF	10	120.00	1
397	604.0	1011.4	0.	YES	UHF	14	284.60	1
398	607.0	835.9	0.	YES	VHF	8	60.00	1
399	607.0	1116.2	0.	YES	UHF	20	346.60	1
400	607.0	835.9	0.	YES	VHF	2	60.00	1
401	609.0	1102.9	0.	YES	UHF	30	338.40	1
402	610.0	1487.1	0.	YES	VHF	12	189.90	1
403	611.0	1206.2	0.	YES	UHF	23	404.80	1
404	612.0	1221.0	0.	YES	UHF	21	414.80	1
405	613.0	2118.8	1059.4	NO	UHF	53	1249.00	1
406	616.0	2808.8	1404.4	NO	UHF	19	2195.00	1
407	616.0	2033.1	1016.6	NO	UHF	50	1150.00	1
408	617.0	1222.4	0.	YES	VHF	10	128.30	1
409	622.0	835.9	0.	YES	VHF	6	60.00	1
410	625.0	1039.1	0.	YES	UHF	20	300.40	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
411	630.0	1541.4	770.7	NO	UHF	18	661.00	1
412	633.0	763.1	0.	YES	VHF	6	50.00	1
413	633.0	763.1	0.	YES	VHF	2	50.00	1
414	633.0	763.1	0.	YES	VHF	6	50.00	1
415	638.0	1356.5	0.	YES	VHF	13	158.00	1
416	638.0	835.9	0.	YES	VHF	4	60.00	1
417	644.0	1515.3	757.6	NO	UHF	26	638.80	1
418	649.0	1114.7	0.	YES	VHF	12	106.70	1
419	649.0	763.1	0.	YES	VHF	3	50.00	1
420	653.0	1364.5	682.3	NO	UHF	67	518.00	1
421	655.0	800.3	0.	YES	VHF	5	55.00	1
422	655.0	1423.1	0.	YES	VHF	10	173.90	1
423	656.0	1391.2	0.	YES	VHF	7	166.20	1
424	661.0	835.9	0.	YES	VHF	6	60.00	1
425	665.0	1292.8	0.	YES	UHF	44	465.00	1
426	666.0	2997.6	1498.8	NO	UHF	45	2500.00	1
427	670.0	1353.5	0.	YES	VHF	7	157.30	1
428	670.0	1461.2	730.6	NO	UHF	17	594.00	1
429	671.0	763.1	0.	YES	VHF	7	50.00	1
430	677.0	1337.5	0.	YES	UHF	54	497.70	1
431	677.0	1032.3	0.	YES	VHF	13	91.50	1
432	684.0	1406.0	703.0	NO	UHF	33	550.00	1
433	691.0	1155.4	0.	YES	UHF	23	371.40	1
434	694.0	1668.2	834.1	NO	UHF	40	774.20	1
435	694.0	2224.7	1112.4	NO	UHF	26	1377.00	1
436	700.0	835.9	0.	YES	VHF	2	60.00	1
437	702.0	1437.6	718.8	NO	UHF	17	575.00	1
438	704.0	1356.5	0.	YES	VHF	11	158.00	1
439	704.0	1301.3	0.	YES	VHF	8	145.40	1
440	705.0	1350.5	0.	YES	VHF	8	156.60	1
441	707.0	2543.3	1271.7	NO	UHF	25	1799.60	1
442	709.0	1952.8	976.4	NO	UHF	32	1061.00	1
443	710.0	1452.0	726.0	NO	UHF	35	586.60	1
444	710.0	1350.5	0.	YES	VHF	8	156.60	1
445	714.0	1144.5	0.	YES	UHF	18	364.40	1
446	715.0	991.4	0.	YES	VHF	12	84.40	1
447	717.0	835.9	0.	YES	VHF	5	60.00	1
448	719.0	1356.5	0.	YES	VHF	12	158.00	1
449	720.0	1356.5	0.	YES	VHF	10	158.00	1
450	720.0	1485.9	0.	YES	VHF	12	189.60	1
451	722.0	1422.5	0.	YES	UHF	32	563.00	1
452	728.0	2997.6	1498.8	NO	UHF	45	2500.00	1
453	730.0	1293.6	0.	YES	VHF	8	143.70	1
454	730.0	1979.4	989.7	NO	UHF	45	1090.00	1
455	730.0	1005.0	0.	YES	UHF	21	281.00	1
456	734.0	1426.8	0.	YES	VHF	7	174.80	1
457	743.0	1788.2	894.1	NO	UHF	18	889.60	1
458	744.0	1463.4	0.	YES	VHF	11	183.90	1
459	745.0	835.9	0.	YES	VHF	6	60.00	1
460	746.0	1359.9	0.	YES	VHF	7	158.80	1
461	747.0	832.4	0.	YES	VHF	6	59.50	1
462	749.0	835.9	0.	YES	VHF	4	60.00	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
463	753.0	884.6	0.	YES	VHF	8	67.20	1
464	753.0	1151.3	0.	YES	UHF	20	368.80	1
465	753.0	1028.9	0.	YES	UHF	33	294.50	1
466	754.0	763.1	0.	YES	VHF	6	50.00	1
467	755.0	1128.0	0.	YES	UHF	43	354.00	1
468	756.0	1191.0	0.	YES	VHF	11	121.80	1
469	756.0	1000.7	0.	YES	UHF	20	278.60	1
470	756.0	1458.0	0.	YES	UHF	18	591.40	1
471	757.0	1060.2	0.	YES	UHF	33	312.70	1
472	762.0	1108.7	0.	YES	UHF	22	342.00	1
473	763.0	2020.7	1010.3	NO	UHF	17	1136.00	1
474	764.0	1103.2	0.	YES	VHF	11	104.50	1
475	765.0	1041.0	0.	YES	UHF	55	301.50	1
476	766.0	798.9	0.	YES	VHF	3	54.80	1
477	769.0	1072.6	0.	YES	UHF	14	320.10	1
478	769.0	1771.4	885.7	NO	UHF	26	873.00	1
479	769.0	2995.0	1497.5	NO	UHF	32	2495.60	1
480	769.0	2675.8	1337.9	NO	UHF	20	1992.00	1
481	770.0	1006.6	0.	YES	VHF	11	87.00	1
482	774.0	1292.3	0.	YES	UHF	25	464.60	1
483	774.0	2274.3	1137.2	NO	UHF	40	1439.10	1
484	775.0	1938.1	969.0	NO	UHF	24	1045.00	1
485	778.0	1485.2	0.	YES	VHF	13	189.40	1
486	778.0	1356.5	0.	YES	VHF	11	158.00	1
487	783.0	801.0	0.	YES	VHF	4	55.10	1
488	789.0	1437.6	0.	YES	UHF	16	575.00	1
489	789.0	1376.5	0.	YES	VHF	7	162.70	1
490	789.0	1356.5	0.	YES	VHF	10	158.00	1
491	789.0	2808.8	1404.4	NO	UHF	22	2195.00	1
492	791.0	1393.2	0.	YES	UHF	31	540.00	1
493	794.0	1487.5	0.	YES	VHF	8	190.00	1
494	794.0	801.0	0.	YES	VHF	6	55.10	1
495	796.0	853.4	0.	YES	UHF	15	202.60	1
496	797.0	1059.2	0.	YES	UHF	40	312.10	1
497	799.0	1425.9	0.	YES	UHF	40	565.70	1
498	800.0	1000.9	0.	YES	UHF	36	278.70	1
499	802.0	1768.4	884.2	NO	UHF	23	870.00	1
500	804.0	1356.5	0.	YES	VHF	12	158.00	1
501	804.0	835.9	0.	YES	VHF	3	60.00	1
502	805.0	1895.9	947.9	NO	UHF	44	1000.00	1
503	808.0	1076.5	0.	YES	VHF	8	99.50	1
504	809.0	1479.5	0.	YES	UHF	46	609.00	1
505	809.0	2746.1	1373.0	NO	UHF	28	2098.00	1
506	810.0	1010.3	0.	YES	UHF	24	284.00	1
507	811.0	1356.5	0.	YES	VHF	9	158.00	1
508	812.0	2930.3	1465.2	NO	UHF	22	2389.00	1
509	815.0	1502.4	0.	YES	UHF	35	628.00	1
510	817.0	1366.7	0.	YES	VHF	7	160.40	1
511	819.0	1768.4	884.2	NO	UHF	49	870.00	1
512	819.0	835.9	0.	YES	VHF	5	60.00	1
513	821.0	1485.6	0.	YES	VHF	13	189.50	1
514	827.0	1630.9	0.	YES	UHF	20	740.00	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
515	831.0	1268.8	0.	YES	UHF	20	447.90	1
516	833.0	1395.0	0.	YES	VHF	8	167.10	1
517	835.0	2054.2	1027.1	NO	UHF	28	1174.00	1
518	835.0	2694.6	1347.3	NO	UHF	27	2020.00	1
519	839.0	1485.6	0.	YES	VHF	9	189.50	1
520	839.0	924.6	0.	YES	VHF	8	73.40	1
521	847.0	1557.6	0.	YES	UHF	68	675.00	1
522	853.0	1328.3	0.	YES	VHF	13	151.50	1
523	853.0	1504.8	0.	YES	UHF	41	630.00	1
524	853.0	2586.5	1293.3	NO	UHF	34	1861.30	1
525	854.0	2997.6	1498.8	NO	UHF	54	2500.00	1
526	855.0	1716.8	858.4	NO	UHF	24	820.00	1
527	856.0	1474.5	0.	YES	VHF	8	186.70	1
528	859.0	1422.7	0.	YES	VHF	13	173.80	1
529	860.0	1747.3	873.6	NO	UHF	27	849.40	1
530	863.0	1582.8	0.	YES	UHF	42	697.00	1
531	870.0	1429.2	0.	YES	VHF	10	175.40	1
532	872.0	1347.4	0.	YES	VHF	8	155.90	1
533	879.0	1526.2	0.	YES	UHF	43	648.00	1
534	879.0	2141.9	1071.0	NO	UHF	15	1276.40	1
535	882.0	1356.5	0.	YES	VHF	11	158.00	1
536	889.0	2195.3	1097.6	NO	UHF	28	1340.80	1
537	890.0	1005.5	0.	YES	UHF	40	281.30	1
538	894.0	994.9	0.	YES	VHF	9	85.00	1
539	894.0	1468.5	0.	YES	UHF	46	600.00	1
540	897.0	2602.3	1301.1	NO	UHF	65	1884.00	1
541	897.0	2159.5	1079.7	NO	UHF	23	1297.40	1
542	899.0	1356.5	0.	YES	VHF	12	158.00	1
543	899.0	1153.8	0.	YES	UHF	16	370.40	1
544	901.0	1350.9	0.	YES	VHF	12	156.70	1
545	904.0	1615.4	0.	YES	UHF	19	726.00	1
546	905.0	1629.1	0.	YES	UHF	19	738.40	1
547	906.0	1458.3	0.	YES	VHF	10	182.60	1
548	907.0	1485.9	0.	YES	VHF	7	189.60	1
549	907.0	1485.6	0.	YES	VHF	8	189.50	1
550	908.0	1172.3	0.	YES	VHF	12	118.00	1
551	909.0	2089.1	1044.5	NO	UHF	14	1214.20	1
552	909.0	1747.9	0.	YES	UHF	22	850.00	1
553	910.0	1561.1	0.	YES	UHF	44	678.00	1
554	910.0	1485.9	0.	YES	VHF	9	189.60	1
555	912.0	1424.7	0.	YES	VHF	10	174.30	1
556	913.0	1431.4	0.	YES	UHF	64	570.00	1
557	913.0	1064.1	0.	YES	UHF	42	315.00	1
558	913.0	2003.5	1001.8	NO	UHF	48	1116.80	1
559	917.0	1356.5	0.	YES	VHF	12	158.00	1
560	918.0	1485.6	0.	YES	VHF	7	189.50	1
561	919.0	1474.6	0.	YES	UHF	29	605.00	1
562	920.0	1576.0	0.	YES	UHF	23	691.00	1
563	920.0	1356.5	0.	YES	VHF	10	158.00	1
564	921.0	1485.2	0.	YES	VHF	13	189.40	1
565	923.0	1089.8	0.	YES	UHF	39	330.40	1
566	923.0	1787.7	0.	YES	UHF	41	889.10	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
567	923.0	1480.1	0.	YES	VHF	10	188.10	1
568	925.0	1356.5	0.	YES	VHF	11	158.00	1
569	926.0	971.8	0.	YES	VHF	8	81.10	1
570	926.0	1242.7	0.	YES	VHF	12	132.60	1
571	926.0	1474.5	0.	YES	VHF	12	186.70	1
572	926.0	1356.5	0.	YES	VHF	7	158.00	1
573	927.0	1421.9	0.	YES	VHF	8	173.60	1
574	927.0	2997.6	1498.8	NO	UHF	64	2500.00	1
575	928.0	1356.5	0.	YES	VHF	13	158.00	1
576	928.0	1356.5	0.	YES	VHF	11	158.00	1
577	929.0	1485.9	0.	YES	VHF	12	189.60	1
578	929.0	1251.5	0.	YES	VHF	8	134.50	1
579	929.0	1356.5	0.	YES	VHF	12	158.00	1
580	930.0	1407.1	0.	YES	VHF	10	170.01	1
581	935.0	1579.4	0.	YES	UHF	16	694.00	1
582	936.0	1356.5	0.	YES	VHF	9	158.01	1
583	937.0	2505.9	1252.9	NO	UHF	44	1747.00	1
584	940.0	1701.0	0.	YES	UHF	32	805.00	1
585	942.0	1500.0	0.	YES	UHF	46	626.00	1
586	945.0	1458.3	0.	YES	VHF	8	182.61	1
587	945.0	3038.1	1519.1	NO	UHF	32	2568.00	1
588	946.0	1416.2	0.	YES	VHF	9	172.21	1
589	948.0	1659.3	0.	YES	UHF	25	766.00	1
590	950.0	1468.5	0.	YES	UHF	47	600.00	1
591	950.0	1972.1	986.0	NO	UHF	52	1082.00	1
592	951.0	1064.1	0.	YES	UHF	20	315.00	1
593	952.0	1341.4	0.	YES	VHF	12	154.51	1
594	952.0	1403.4	0.	YES	VHF	12	169.11	1
595	952.0	2256.0	1128.0	NO	UHF	27	1416.00	1
596	953.0	1403.4	0.	YES	VHF	9	169.11	1
597	954.0	2006.4	1003.2	NO	UHF	36	1120.00	1
598	954.0	1347.5	0.	YES	VHF	13	155.91	1
599	955.0	1152.9	0.	YES	UHF	35	369.80	1
600	955.0	1447.6	0.	YES	UHF	41	583.00	1
601	956.0	1122.6	0.	YES	UHF	29	350.60	1
602	956.0	2499.4	1249.7	NO	UHF	40	1738.00	1
603	956.0	1387.5	0.	YES	VHF	10	165.31	1
604	956.0	2479.2	1239.6	NO	UHF	16	1710.00	1
605	956.0	2259.2	1129.6	NO	UHF	28	1420.00	1
606	957.0	1458.3	0.	YES	VHF	12	182.61	1
607	957.0	1023.6	0.	YES	UHF	41	291.50	1
608	958.0	1325.7	0.	YES	VHF	13	150.91	1
609	959.0	1366.4	0.	YES	VHF	10	160.31	1
610	959.0	2006.4	1003.2	NO	UHF	23	1120.00	1
611	959.0	1356.5	0.	YES	VHF	12	158.01	1
612	959.0	1372.0	0.	YES	UHF	31	523.70	1
613	959.0	2188.9	1094.5	NO	UHF	57	1333.00	1
614	959.0	1035.1	0.	YES	UHF	35	298.10	1
615	960.0	1468.6	0.	YES	UHF	14	600.01	1
616	960.0	2898.0	1449.0	NO	UHF	54	2336.51	1
617	960.0	1770.4	0.	YES	UHF	31	872.01	1
618	963.0	2469.9	1234.9	NO	UHF	16	1697.21	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
619	964.0	1958.4	979.2	NO	UHF	38	1067.01	1
620	970.0	1955.6	977.8	NO	UHF	53	1064.01	1
621	970.0	1356.5	0.	YES	VHF	11	158.01	1
622	973.0	2006.3	1003.2	NO	UHF	20	1119.91	1
623	974.0	1485.6	0.	YES	VHF	12	189.51	1
624	974.0	1343.6	0.	YES	VHF	7	155.01	1
625	975.0	1424.8	0.	YES	VHF	10	174.31	1
626	976.0	1356.5	0.	YES	VHF	8	158.01	1
627	976.0	1383.7	0.	YES	VHF	11	164.41	1
628	977.0	2161.6	1080.8	NO	UHF	16	1300.01	1
629	979.0	1480.1	0.	YES	VHF	12	188.11	1
630	979.0	1297.7	0.	YES	VHF	13	144.61	1
631	979.0	1356.5	0.	YES	VHF	12	158.01	1
632	979.0	1401.3	0.	YES	VHF	8	168.61	1
633	982.0	1939.9	0.	YES	UHF	19	1047.01	1
634	983.0	1356.5	0.	YES	VHF	13	158.01	1
635	984.0	1381.8	0.	YES	UHF	16	531.21	1
636	985.0	1350.5	0.	YES	VHF	8	156.61	1
637	987.0	2497.2	1248.6	NO	UHF	47	1735.01	1
638	987.0	2814.6	1407.3	NO	UHF	33	2204.01	1
639	987.0	2997.7	1498.8	NO	UHF	15	2500.01	1
640	988.0	1445.5	0.	YES	VHF	8	179.41	1
641	989.0	1424.8	0.	YES	VHF	8	174.31	1
642	989.0	1485.6	0.	YES	VHF	7	189.51	1
643	989.0	1895.9	0.	YES	UHF	61	1000.01	1
644	989.0	1450.1	0.	YES	UHF	27	585.01	1
645	990.0	2099.0	1049.5	NO	UHF	30	1225.71	1
646	990.0	1353.1	0.	YES	UHF	33	509.41	1
647	993.0	1331.0	0.	YES	VHF	12	152.11	1
648	994.0	1895.9	0.	YES	UHF	23	1000.01	1
649	994.0	1630.4	0.	YES	UHF	23	739.51	1
650	995.0	1356.5	0.	YES	VHF	7	158.01	1
651	996.0	1455.5	0.	YES	VHF	11	181.91	1
652	997.0	2076.8	1038.4	NO	UHF	45	1200.01	1
653	999.0	2415.3	1207.7	NO	UHF	17	1623.01	1
654	999.0	1486.0	0.	YES	VHF	7	189.61	1
655	1002.0	1564.5	0.	YES	UHF	51	681.01	1
656	1002.0	1463.5	0.	YES	VHF	13	183.91	1
657	1002.0	2006.4	1003.2	NO	UHF	17	1120.01	1
658	1003.0	1356.5	0.	YES	VHF	7	158.01	1
659	1003.0	1486.0	0.	YES	VHF	13	189.61	1
660	1003.0	1469.0	0.	YES	VHF	9	185.31	1
661	1003.0	1485.6	0.	YES	VHF	9	189.51	1
662	1004.0	1776.5	0.	YES	UHF	28	878.01	1
663	1004.0	1577.1	0.	YES	UHF	31	692.01	1
664	1005.0	2254.4	1127.2	NO	UHF	27	1414.01	1
665	1008.0	2170.1	1085.1	NO	UHF	22	1310.21	1
666	1008.0	1350.5	0.	YES	VHF	9	156.61	1
667	1009.0	1262.9	0.	YES	UHF	56	443.71	1
668	1009.0	1286.7	0.	YES	UHF	26	460.61	1
669	1009.0	1403.4	0.	YES	VHF	10	169.11	1
670	1010.0	2865.9	1432.9	NO	UHF	17	2285.01	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
671	1010.0	1468.6	0.	YES	UHF	20	600.01	1
672	1010.0	1219.1	0.	YES	VHF	9	127.61	1
673	1013.0	2050.7	1025.4	NO	UHF	24	1170.01	1
674	1013.0	2050.7	1025.4	NO	UHF	50	1170.01	1
675	1015.0	2054.0	1027.0	NO	UHF	48	1173.71	1
676	1016.0	1369.8	0.	YES	VHF	9	161.11	1
677	1017.0	2076.8	1038.4	NO	UHF	31	1200.01	1
678	1017.0	1595.3	0.	YES	UHF	22	708.01	1
679	1018.0	1504.8	0.	YES	UHF	18	630.01	1
680	1021.0	1386.7	0.	YES	UHF	30	535.01	1
681	1021.0	1613.2	0.	YES	UHF	26	724.01	1
682	1022.0	1372.7	0.	YES	UHF	21	524.21	1
683	1022.0	1158.5	0.	YES	UHF	16	373.41	1
684	1022.0	1059.2	0.	YES	UHF	23	312.11	1
685	1022.0	1324.4	0.	YES	UHF	15	488.01	1
686	1026.0	1172.3	0.	YES	VHF	7	118.01	1
687	1026.0	1071.5	0.	YES	UHF	17	319.41	1
688	1028.0	2851.4	1425.7	NO	UHF	16	2262.01	1
689	1028.0	1160.1	0.	YES	UHF	14	374.41	1
690	1029.0	2226.4	1113.2	NO	UHF	19	1379.01	1
691	1031.0	1485.6	0.	YES	VHF	13	189.51	1
692	1031.0	1341.4	0.	YES	VHF	10	154.51	1
693	1031.0	1365.2	0.	YES	UHF	33	518.51	1
694	1032.0	1580.3	0.	YES	UHF	16	694.81	1
695	1034.0	1647.4	0.	YES	UHF	44	755.01	1
696	1035.0	1356.5	0.	YES	VHF	12	158.01	1
697	1040.0	1486.0	0.	YES	VHF	9	189.61	1
698	1043.0	1340.6	0.	YES	UHF	62	500.01	1
699	1043.0	1523.8	0.	YES	UHF	17	646.01	1
700	1044.0	1458.3	0.	YES	VHF	10	182.61	1
701	1045.0	2587.7	1293.9	NO	UHF	21	1863.01	1
702	1046.0	1422.7	0.	YES	VHF	12	173.81	1
703	1049.0	2681.2	1340.6	NO	UHF	24	2000.01	1
704	1054.0	1262.4	0.	YES	UHF	57	443.41	1
705	1054.0	2050.7	0.	YES	UHF	22	1170.01	1
706	1056.0	1323.5	0.	YES	VHF	10	150.41	1
707	1059.0	1486.0	0.	YES	VHF	7	189.61	1
708	1059.0	1373.7	0.	YES	UHF	15	525.01	1
709	1060.0	1304.7	0.	YES	UHF	38	473.61	1
710	1060.0	1262.4	0.	YES	UHF	17	443.41	1
711	1060.0	1485.6	0.	YES	VHF	7	189.51	1
712	1061.0	2120.5	0.	YES	UHF	18	1251.01	1
713	1061.0	2054.2	0.	YES	UHF	36	1174.01	1
714	1063.0	1279.6	0.	YES	VHF	11	140.61	1
715	1063.0	1286.6	0.	YES	UHF	28	460.51	1
716	1064.0	1486.0	0.	YES	VHF	8	189.61	1
717	1067.0	1347.5	0.	YES	VHF	7	155.91	1
718	1068.0	1486.0	0.	YES	VHF	13	189.61	1
719	1084.0	1450.1	0.	YES	UHF	34	585.01	1
720	1086.0	1485.6	0.	YES	VHF	7	189.51	1
721	1088.0	1383.7	0.	YES	VHF	11	164.41	1
722	1089.0	2356.5	1178.3	NO	UHF	30	1545.01	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
723	1090.0	1424.8	0.	YES	VHF	11	174.31	1
724	1093.0	1486.0	0.	YES	VHF	13	189.61	1
725	1097.0	1356.5	0.	YES	VHF	8	158.01	1
726	1103.0	1905.3	0.	YES	UHF	18	1010.01	1
727	1104.0	2150.0	0.	YES	UHF	17	1286.01	1
728	1108.0	1293.7	0.	YES	VHF	13	143.71	1
729	1109.0	1474.7	0.	YES	UHF	27	605.01	1
730	1115.0	1983.4	0.	YES	UHF	30	1094.51	1
731	1119.0	1540.2	0.	YES	UHF	41	660.01	1
732	1124.0	1450.3	0.	YES	UHF	50	585.21	1
733	1127.0	1415.7	0.	YES	VHF	10	172.11	1
734	1134.0	1356.5	0.	YES	VHF	12	158.01	1
735	1139.0	1337.1	0.	YES	UHF	57	497.41	1
736	1142.0	1340.6	0.	YES	UHF	27	500.01	1
737	1144.0	2063.6	0.	YES	UHF	18	1184.81	1
738	1144.0	1994.7	0.	YES	UHF	24	1107.01	1
739	1144.0	1453.5	0.	YES	VHF	11	181.41	1
740	1145.0	1471.0	0.	YES	UHF	14	602.01	1
741	1150.0	2997.7	1498.8	NO	UHF	29	2500.01	1
742	1150.0	1193.5	0.	YES	UHF	27	396.31	1
743	1156.0	1333.2	0.	YES	UHF	28	494.51	1
744	1159.0	2997.7	1498.8	NO	UHF	36	2500.01	1
745	1160.0	1276.9	0.	YES	UHF	21	453.61	1
746	1160.0	1414.1	0.	YES	VHF	13	171.71	1
747	1161.0	2383.1	1191.5	NO	UHF	38	1580.01	1
748	1161.0	2008.2	0.	YES	UHF	56	1122.01	1
749	1161.0	1876.3	0.	YES	UHF	25	979.41	1
750	1166.0	1685.1	0.	YES	UHF	21	790.01	1
751	1185.0	1401.4	0.	YES	UHF	19	546.41	1
752	1185.0	1356.5	0.	YES	VHF	8	158.01	1
753	1185.0	1395.0	0.	YES	VHF	13	167.11	1
754	1198.0	1671.0	0.	YES	UHF	29	776.81	1
755	1199.0	2800.2	1400.1	NO	UHF	35	2181.51	1
756	1200.0	2919.9	1460.0	NO	UHF	28	2372.01	1
757	1202.0	1468.6	0.	YES	UHF	29	600.01	1
758	1202.0	1938.1	0.	YES	UHF	24	1045.01	1
759	1217.0	1449.7	0.	YES	UHF	34	584.71	1
760	1218.0	1405.0	0.	YES	VHF	9	169.51	1
761	1225.0	1485.6	0.	YES	VHF	9	189.51	1
762	1234.0	2439.0	0.	YES	UHF	23	1655.01	1
763	1240.0	1265.3	0.	YES	UHF	31	445.41	1
764	1244.0	1420.3	0.	YES	VHF	10	173.21	1
765	1249.0	1356.5	0.	YES	VHF	13	158.01	1
766	1256.0	1379.9	0.	YES	VHF	10	163.51	1
767	1264.0	1302.4	0.	YES	UHF	18	471.91	1
768	1274.0	2681.2	1340.6	NO	UHF	17	2000.01	1
769	1277.0	1344.4	0.	YES	VHF	13	155.21	1
770	1279.0	1696.8	0.	YES	UHF	38	801.01	1
771	1282.0	1485.6	0.	YES	VHF	10	189.51	1
772	1292.5	1356.5	0.	YES	VHF	7	158.01	1
773	1295.0	1340.6	0.	YES	UHF	15	500.01	1
774	1304.0	1545.7	0.	YES	UHF	27	664.71	1

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
775	1305.0	1356.5	0.	YES	VHF	11	158.01	1
776	1319.0	2703.2	1351.6	NO	UHF	25	2033.01	1
777	1328.0	1467.2	0.	YES	UHF	41	598.91	1
778	1364.0	2123.9	0.	YES	UHF	36	1255.01	1
779	1388.0	1433.3	0.	YES	VHF	8	176.41	1
780	1393.0	1423.1	0.	YES	VHF	13	173.91	1
781	1394.0	1485.2	0.	YES	VHF	13	189.41	1
782	1397.0	2332.0	0.	YES	UHF	24	1513.01	1
783	1403.0	1423.1	0.	YES	VHF	11	173.91	1
784	1405.0	1420.3	0.	YES	VHF	9	173.21	1
785	1410.0	2997.7	1498.8	NO	UHF	38	2500.01	1
786	1416.0	2817.2	0.	YES	UHF	44	2208.01	1
787	1416.0	2322.0	0.	YES	UHF	32	1500.01	1
788	1418.0	1647.4	0.	YES	UHF	20	755.01	1
789	1433.0	2997.7	1498.8	NO	UHF	39	2500.01	1
790	1434.0	1486.0	0.	YES	VHF	12	189.61	1
791	1434.0	2026.9	0.	YES	UHF	44	1143.01	1
792	1438.0	1714.4	0.	YES	UHF	22	817.71	1
793	1446.0	2036.6	0.	YES	UHF	35	1154.01	1
794	1449.0	1960.2	0.	YES	UHF	23	1069.01	1
795	1449.0	1453.5	0.	YES	VHF	7	181.41	1
796	1456.0	1486.0	0.	YES	VHF	10	189.61	1
797	1463.0	2512.3	0.	YES	UHF	36	1756.01	1
798	1472.0	2997.7	1498.8	NO	UHF	66	2500.01	1
799	1479.0	1480.1	0.	YES	VHF	10	188.11	1
800	1480.0	2836.7	0.	YES	UHF	39	2238.81	1
801	1480.0	2665.0	0.	YES	UHF	34	1976.01	1
802	1489.0	2844.5	0.	YES	UHF	27	2251.01	1
803	1489.0	1870.1	0.	YES	UHF	33	973.01	1
804	1489.0	2967.5	0.	YES	UHF	21	2450.01	1
805	1493.0	1962.0	0.	YES	UHF	42	1071.01	1
806	1493.0	2047.2	0.	YES	UHF	29	1166.01	1
807	1498.0	2997.7	1498.8	NO	UHF	22	2500.01	1
808	1499.0	1530.9	0.	YES	UHF	19	652.01	1
809	1509.0	2014.5	0.	YES	UHF	47	1129.01	1
810	1520.0	1747.9	0.	YES	UHF	26	850.01	1
811	1525.0	1765.9	0.	YES	UHF	24	867.61	1
812	1533.0	2997.7	0.	YES	UHF	23	2500.01	1
813	1556.0	1872.0	0.	YES	UHF	43	975.01	1
814	1581.0	1617.1	0.	YES	UHF	27	727.51	1
815	1667.0	2997.7	0.	YES	UHF	15	2500.01	1
816	1669.0	2997.7	0.	YES	UHF	60	2500.01	1
817	1689.0	2076.8	0.	YES	UHF	41	1200.01	1
818	1755.0	2997.7	0.	YES	UHF	32	2500.01	1
819	1930.0	2997.7	0.	YES	UHF	26	2500.01	1
820	30.0	214.0	84.1	NO	VHF	10	39.34	10
821	30.0	36.4	0.	YES	VHF	11	1.14	10
822	30.0	339.2	133.3	NO	VHF	11	98.80	10
823	30.0	298.8	149.4	NO	UHF	51	248.40	10
824	30.0	356.1	178.1	NO	UHF	53	352.80	10
825	30.0	98.6	38.7	NO	VHF	3	8.34	10
826	30.0	72.2	0.	YES	VHF	3	4.48	10

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
827	30.0	144.1	56.6	NO	VHF	7	17.82	10
828	30.0	63.6	0.	YES	VHF	13	3.47	10
829	30.0	93.0	36.5	NO	VHF	13	7.42	10
830	30.0	73.2	0.	YES	VHF	13	4.60	10
831	30.0	234.2	92.0	NO	VHF	10	47.08	10
832	30.0	149.7	58.8	NO	VHF	12	19.24	10
833	30.0	148.1	58.2	NO	VHF	10	18.84	10
834	30.0	259.9	102.1	NO	VHF	9	58.00	10
835	40.0	296.3	116.4	NO	VHF	11	75.40	10
836	42.0	46.2	0.	YES	VHF	10	1.84	10
837	42.0	109.8	43.1	NO	VHF	4	10.36	10
838	49.0	189.1	74.3	NO	VHF	2	30.72	10
839	50.0	263.0	103.3	NO	VHF	8	59.40	10
840	50.0	335.4	131.8	NO	VHF	8	96.60	10
841	56.0	282.2	110.9	NO	VHF	7	68.40	10
842	56.0	329.7	164.9	NO	UHF	33	302.50	10
843	59.0	96.5	0.	YES	VHF	2	8.00	10
844	66.0	161.7	0.	YES	VHF	3	22.44	10
845	67.0	283.3	111.3	NO	VHF	12	68.90	10
846	69.0	258.8	101.7	NO	VHF	12	57.50	10
847	70.0	205.1	80.6	NO	VHF	8	36.12	10
848	71.0	281.4	110.5	NO	VHF	8	68.00	10
849	71.0	402.8	158.2	NO	VHF	12	139.30	10
850	73.0	139.4	0.	YES	VHF	5	16.68	10
851	73.0	228.0	89.6	NO	VHF	13	44.64	10
852	74.0	410.1	161.1	NO	VHF	12	144.40	10
853	76.0	469.0	184.3	NO	VHF	7	188.90	10
854	79.0	508.7	254.4	NO	UHF	57	720.00	10
855	81.0	177.4	0.	YES	VHF	9	27.02	10
856	81.0	144.2	0.	YES	VHF	4	17.86	10
857	83.0	443.9	174.4	NO	VHF	13	169.20	10
858	84.0	289.4	113.7	NO	VHF	10	71.90	10
859	84.0	290.8	145.4	NO	UHF	36	235.20	10
860	85.0	426.8	167.7	NO	VHF	10	156.40	10
861	89.0	264.3	103.8	NO	VHF	5	60.00	10
862	90.0	248.8	124.4	NO	UHF	42	172.20	10
863	90.0	225.3	0.	YES	VHF	5	43.58	10
864	90.0	193.7	0.	YES	VHF	5	32.22	10
865	91.0	100.9	0.	YES	UHF	20	28.32	10
866	92.0	169.9	0.	YES	VHF	4	24.78	10
867	95.0	138.6	0.	YES	VHF	11	16.50	10
868	97.0	335.6	167.8	NO	UHF	47	313.40	10
869	97.0	418.3	209.1	NO	UHF	54	486.80	10
870	99.0	708.6	354.3	NO	UHF	51	1397.00	10
871	100.0	195.7	0.	YES	VHF	2	32.90	10
872	101.0	155.6	0.	YES	VHF	2	20.78	10
873	102.0	481.5	240.7	NO	UHF	20	645.00	10
874	103.0	448.6	224.3	NO	UHF	30	560.00	10
875	103.0	183.1	0.	YES	VHF	4	28.80	10
876	104.0	698.8	349.4	NO	UHF	18	1358.70	10
877	106.0	261.0	0.	YES	VHF	12	58.50	10
878	106.0	422.8	166.1	NO	VHF	10	153.50	10

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
879	106.0	463.9	231.9	NO	UHF	29	598.70	10
880	107.0	212.1	0.	YES	VHF	13	38.64	10
881	107.0	449.9	176.7	NO	VHF	8	173.80	10
882	109.0	634.5	317.2	NO	UHF	31	1120.00	10
883	110.0	469.8	184.5	NO	VHF	8	189.50	10
884	112.0	349.5	174.8	NO	UHF	21	339.90	10
885	112.0	813.2	406.6	NO	UHF	40	1840.00	10
886	113.0	533.5	266.8	NO	UHF	22	792.00	10
887	117.0	241.7	120.8	NO	UHF	50	162.50	10
888	117.0	209.8	0.	YES	VHF	13	37.80	10
889	119.0	307.7	153.8	NO	UHF	23	263.40	10
890	120.0	657.6	328.8	NO	UHF	21	1203.00	10
891	121.0	399.3	199.7	NO	UHF	15	443.60	10
892	123.0	320.3	160.2	NO	UHF	32	285.50	10
893	125.0	212.6	0.	YES	VHF	6	38.82	10
894	126.0	318.9	159.5	NO	UHF	29	283.00	10
895	129.0	336.4	132.2	NO	VHF	9	97.20	10
896	132.0	263.5	0.	YES	VHF	13	59.60	10
897	134.0	317.9	0.	YES	VHF	7	86.80	10
898	135.0	340.7	170.4	NO	UHF	35	323.00	10
899	135.0	174.0	0.	YES	VHF	6	26.00	10
900	135.0	205.1	0.	YES	VHF	10	36.12	10
901	138.0	332.9	166.5	NO	UHF	21	308.40	10
902	140.0	589.2	294.6	NO	UHF	58	966.00	10
903	140.0	303.3	0.	YES	VHF	12	79.00	10
904	140.0	1012.7	506.3	NO	UHF	39	2853.00	10
905	141.0	527.8	263.9	NO	UHF	60	775.00	10
906	142.0	144.0	0.	YES	VHF	6	17.80	10
907	143.0	616.1	308.0	NO	UHF	23	1056.00	10
908	144.0	720.7	360.3	NO	UHF	38	1445.00	10
909	149.0	264.3	0.	YES	VHF	4	60.00	10
910	150.0	377.0	188.5	NO	UHF	34	395.40	10
911	151.0	251.7	0.	YES	VHF	3	54.40	10
912	151.0	173.8	0.	YES	VHF	3	25.94	10
913	153.0	350.7	0.	YES	VHF	7	105.60	10
914	155.0	449.4	224.7	NO	UHF	16	561.80	10
915	157.0	412.8	162.2	NO	VHF	9	146.30	10
916	158.0	386.1	0.	YES	VHF	11	128.00	10
917	159.0	684.5	342.2	NO	UHF	52	1303.40	10
918	160.0	367.3	183.7	NO	UHF	40	375.40	10
919	160.0	205.1	0.	YES	VHF	6	36.12	10
920	160.0	253.1	0.	YES	VHF	6	55.00	10
921	161.0	503.5	251.7	NO	UHF	14	705.30	10
922	162.0	701.1	350.5	NO	UHF	36	1367.50	10
923	163.0	247.3	0.	YES	VHF	6	52.50	10
924	167.0	317.2	0.	YES	VHF	11	86.40	10
925	167.0	277.0	0.	YES	VHF	9	65.90	10
926	167.0	332.4	0.	YES	VHF	7	94.90	10
927	168.0	328.6	0.	YES	UHF	42	300.40	10
928	170.0	316.8	0.	YES	VHF	13	86.20	10
929	172.0	679.6	339.8	NO	UHF	22	1285.00	10
930	173.0	560.3	280.1	NO	UHF	23	873.30	10

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
931	174.0	322.7	0.	YES	VHF	12	89.40	10
932	178.0	407.8	0.	YES	VHF	8	142.80	10
933	178.0	253.1	0.	YES	VHF	3	55.00	10
934	180.0	268.7	0.	YES	VHF	7	62.00	10
935	182.0	429.0	0.	YES	VHF	10	158.00	10
936	182.0	539.2	269.6	NO	UHF	46	809.00	10
937	184.0	446.1	0.	YES	VHF	7	170.90	10
938	185.0	520.9	260.5	NO	UHF	19	755.00	10
939	185.0	449.9	0.	YES	VHF	9	173.80	10
940	187.0	240.2	0.	YES	VHF	7	49.54	10
941	187.5	345.5	0.	YES	UHF	25	332.10	10
942	188.0	226.2	0.	YES	UHF	15	142.30	10
943	190.0	605.5	302.7	NO	UHF	29	1020.00	10
944	191.0	343.7	0.	YES	UHF	15	328.70	10
945	194.0	449.1	0.	YES	VHF	10	173.20	10
946	195.0	476.4	238.2	NO	UHF	14	631.40	10
947	195.0	394.3	197.2	NO	UHF	40	432.60	10
948	198.0	449.4	0.	YES	VHF	10	173.40	10
949	198.0	429.0	0.	YES	VHF	13	158.00	10
950	199.0	264.3	0.	YES	VHF	3	60.00	10
951	200.0	353.1	0.	YES	UHF	47	346.80	10
952	201.0	469.9	0.	YES	VHF	8	189.60	10
953	203.0	391.3	0.	YES	VHF	7	131.50	10
954	203.0	447.2	0.	YES	VHF	9	171.70	10
955	205.0	492.9	246.5	NO	UHF	18	676.00	10
956	205.0	357.9	0.	YES	VHF	10	110.00	10
957	207.0	360.3	0.	YES	VHF	10	111.50	10
958	207.0	258.5	0.	YES	VHF	3	57.40	10
959	208.0	429.0	0.	YES	VHF	9	158.00	10
960	208.0	283.6	0.	YES	UHF	19	223.70	10
961	211.0	947.9	474.0	NO	UHF	20	2500.00	10
962	212.0	755.1	377.6	NO	UHF	26	1586.40	10
963	214.0	437.6	0.	YES	VHF	12	164.40	10
964	214.0	433.7	0.	YES	VHF	8	161.50	10
965	214.0	469.8	0.	YES	VHF	8	189.50	10
966	214.0	703.0	351.5	NO	UHF	50	1375.00	10
967	215.0	679.6	339.8	NO	UHF	14	1285.00	10
968	215.0	453.2	0.	YES	VHF	7	176.40	10
969	219.0	735.6	367.8	NO	UHF	26	1505.60	10
970	219.0	419.1	0.	YES	VHF	13	150.80	10
971	222.0	753.8	376.9	NO	UHF	47	1581.00	10
972	225.0	492.9	246.4	NO	UHF	17	675.80	10
973	225.0	361.1	0.	YES	UHF	15	362.80	10
974	226.0	362.0	0.	YES	VHF	13	112.50	10
975	226.0	416.0	0.	YES	VHF	7	148.60	10
976	230.0	266.3	0.	YES	VHF	10	60.90	10
977	231.0	721.9	361.0	NO	UHF	17	1450.00	10
978	232.0	737.8	368.9	NO	UHF	30	1514.40	10
979	234.0	241.3	0.	YES	VHF	2	50.00	10
980	235.0	266.8	0.	YES	UHF	67	198.10	10
981	242.0	641.5	320.8	NO	UHF	33	1145.00	10
982	242.0	438.5	0.	YES	UHF	15	535.00	10

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
983	248.0	947.9	474.0	NO	UHF	17	2500.00	10
984	249.0	448.7	0.	YES	VHF	11	172.90	10
985	256.0	388.3	0.	YES	UHF	45	419.40	10
986	261.0	481.5	0.	YES	UHF	29	645.00	10
987	269.0	325.2	0.	YES	VHF	13	90.80	10
988	269.0	336.4	0.	YES	UHF	22	314.80	10
989	276.0	451.3	0.	YES	VHF	8	174.90	10
990	276.0	439.9	0.	YES	VHF	10	166.20	10
991	280.0	449.1	0.	YES	VHF	12	173.20	10
992	281.0	533.9	0.	YES	UHF	24	793.00	10
993	281.0	404.5	0.	YES	VHF	11	140.50	10
994	282.0	891.9	445.9	NO	UHF	48	2213.00	10
995	284.0	704.0	352.0	NO	UHF	21	1379.00	10
996	290.0	336.8	0.	YES	UHF	18	315.50	10
997	290.5	450.5	0.	YES	VHF	13	174.30	10
998	298.5	521.6	0.	YES	UHF	33	757.00	10
999	299.0	426.8	0.	YES	VHF	12	156.40	10
1000	299.0	368.8	0.	YES	UHF	25	378.40	10
1001	300.0	443.8	0.	YES	VHF	9	169.10	10
1002	303.0	356.0	0.	YES	UHF	61	352.60	10
1003	305.0	470.2	0.	YES	UHF	21	615.00	10
1004	305.0	476.2	0.	YES	UHF	31	631.00	10
1005	306.0	589.2	0.	YES	UHF	68	966.00	10
1006	306.0	866.5	433.3	NO	UHF	19	2089.10	10
1007	310.0	356.0	0.	YES	UHF	52	352.60	10
1008	311.0	319.7	0.	YES	UHF	19	284.30	10
1009	315.0	662.1	331.1	NO	UHF	35	1219.70	10
1010	320.0	688.3	344.1	NO	UHF	53	1318.00	10
1011	323.0	369.9	0.	YES	UHF	26	380.60	10
1012	323.0	662.2	331.1	NO	UHF	28	1220.00	10
1013	328.0	360.7	0.	YES	UHF	24	362.00	10
1014	333.0	429.0	0.	YES	VHF	13	158.00	10
1015	334.0	358.1	0.	YES	UHF	49	356.80	10
1016	350.0	461.1	0.	YES	VHF	8	182.60	10
1017	359.0	611.4	0.	YES	UHF	22	1040.00	10
1018	360.0	538.2	0.	YES	UHF	43	806.00	10
1019	361.0	510.9	0.	YES	UHF	58	726.10	10
1020	363.0	377.8	0.	YES	UHF	66	397.00	10
1021	366.0	469.8	0.	YES	VHF	11	189.50	10
1022	370.0	530.3	0.	YES	UHF	31	782.50	10
1023	380.0	466.3	0.	YES	VHF	9	186.70	10
1024	387.0	415.5	0.	YES	UHF	20	480.40	10
1025	407.0	547.7	0.	YES	UHF	40	834.60	10
1026	408.0	465.1	0.	YES	UHF	15	601.80	10
1027	414.0	886.4	443.2	NO	UHF	67	2186.00	10
1028	420.0	562.2	0.	YES	UHF	50	879.20	10
1029	423.0	509.4	0.	YES	UHF	66	722.00	10
1030	425.0	429.0	0.	YES	VHF	7	158.00	10
1031	429.0	469.8	0.	YES	VHF	11	189.50	10
1032	430.0	469.8	0.	YES	VHF	13	189.50	10
1033	430.0	436.4	0.	YES	VHF	10	163.50	10
1034	430.0	469.9	0.	YES	VHF	11	189.60	10

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
1035	448.0	475.9	0.	YES	UHF	33	630.00	10
1036	456.0	481.5	0.	YES	UHF	19	645.00	10
1037	459.0	736.5	0.	YES	UHF	24	1509.00	10
1038	460.0	679.6	0.	YES	UHF	27	1285.00	10
1039	460.0	702.8	0.	YES	UHF	16	1374.00	10
1040	460.0	464.4	0.	YES	UHF	21	600.00	10
1041	469.0	663.6	0.	YES	UHF	50	1225.00	10
1042	478.0	730.3	0.	YES	UHF	24	1484.00	10
1043	490.0	513.6	0.	YES	UHF	15	734.00	10
1044	490.0	865.7	0.	YES	UHF	22	2085.00	10
1045	508.0	606.7	0.	YES	UHF	31	1024.00	10
1046	520.0	579.1	0.	YES	UHF	22	933.00	10
1047	565.0	718.9	0.	YES	UHF	25	1438.00	10
1048	569.0	656.3	0.	YES	UHF	27	1198.20	10
1049	578.0	793.6	0.	YES	UHF	22	1752.40	10
1050	613.0	670.0	0.	YES	UHF	53	1249.00	10
1051	616.0	888.2	0.	YES	UHF	19	2195.00	10
1052	616.0	642.9	0.	YES	UHF	50	1150.00	10
1053	666.0	947.9	0.	YES	UHF	45	2500.00	10
1054	694.0	703.5	0.	YES	UHF	26	1377.00	10
1055	707.0	804.3	0.	YES	UHF	25	1799.60	10
1056	728.0	947.9	0.	YES	UHF	45	2500.00	10
1057	769.0	947.1	0.	YES	UHF	32	2495.60	10
1058	769.0	846.2	0.	YES	UHF	20	1992.00	10
1059	789.0	888.2	0.	YES	UHF	22	2195.00	10
1060	809.0	868.4	0.	YES	UHF	28	2098.00	10
1061	812.0	926.7	0.	YES	UHF	22	2389.00	10
1062	835.0	852.1	0.	YES	UHF	27	2020.00	10
1063	854.0	947.9	0.	YES	UHF	54	2500.00	10
1064	927.0	947.9	0.	YES	UHF	64	2500.00	10
1065	945.0	960.7	0.	YES	UHF	32	2568.00	10
1066	30.0	69.7	0.	YES	VHF	3	8.34	20
1067	30.0	65.7	0.	YES	VHF	13	7.42	20
1068	30.0	211.3	105.6	NO	UHF	51	248.40	20
1069	30.0	51.8	0.	YES	VHF	13	4.60	20
1070	30.0	183.8	72.2	NO	VHF	9	58.00	20
1071	30.0	165.6	65.0	NO	VHF	10	47.08	20
1072	30.0	51.1	0.	YES	VHF	3	4.48	20
1073	30.0	105.8	41.6	NO	VHF	12	19.24	20
1074	30.0	101.9	40.0	NO	VHF	7	17.82	20
1075	30.0	104.7	41.1	NO	VHF	10	18.84	20
1076	30.0	45.0	0.	YES	VHF	13	3.47	20
1077	30.0	239.9	94.2	NO	VHF	11	98.80	20
1078	30.0	251.8	125.9	NO	UHF	53	352.80	20
1079	30.0	151.4	59.5	NO	VHF	10	39.34	20
1080	40.0	209.5	82.3	NO	VHF	11	75.40	20
1081	42.0	77.7	0.	YES	VHF	4	10.36	20
1082	49.0	133.7	52.5	NO	VHF	2	30.72	20
1083	50.0	186.0	73.1	NO	VHF	8	59.40	20
1084	50.0	237.2	93.2	NO	VHF	8	96.60	20
1085	56.0	199.6	78.4	NO	VHF	7	68.40	20
1086	56.0	233.2	116.6	NO	UHF	33	302.50	20

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
1087	59.0	68.3	0.	YES	VHF	2	8.00	20
1088	66.0	114.3	0.	YES	VHF	3	22.44	20
1089	67.0	200.3	78.7	NO	VHF	12	68.90	20
1090	69.0	183.0	71.9	NO	VHF	12	57.50	20
1091	70.0	145.0	0.	YES	VHF	8	36.12	20
1092	71.0	284.8	111.9	NO	VHF	12	139.30	20
1093	71.0	199.0	78.2	NO	VHF	8	68.00	20
1094	73.0	161.2	0.	YES	VHF	13	44.64	20
1095	73.0	98.6	0.	YES	VHF	5	16.68	20
1096	74.0	290.0	113.9	NO	VHF	12	144.40	20
1097	76.0	331.7	130.3	NO	VHF	7	188.90	20
1098	79.0	359.7	179.9	NO	UHF	57	720.00	20
1099	81.0	125.4	0.	YES	VHF	9	27.02	20
1100	81.0	102.0	0.	YES	VHF	4	17.86	20
1101	83.0	313.9	123.3	NO	VHF	13	169.20	20
1102	84.0	205.6	102.8	NO	UHF	36	235.20	20
1103	84.0	204.6	0.	YES	VHF	10	71.90	20
1104	85.0	301.8	118.5	NO	VHF	10	156.40	20
1105	89.0	186.9	0.	YES	VHF	5	60.00	20
1106	90.0	137.0	0.	YES	VHF	5	32.22	20
1107	90.0	175.9	0.	YES	UHF	42	172.20	20
1108	90.0	159.3	0.	YES	VHF	5	43.58	20
1109	92.0	120.1	0.	YES	VHF	4	24.78	20
1110	95.0	98.0	0.	YES	VHF	11	16.50	20
1111	97.0	295.8	147.9	NO	UHF	54	486.80	20
1112	97.0	237.3	118.7	NO	UHF	47	313.40	20
1113	99.0	501.1	250.5	NO	UHF	51	1397.00	20
1114	100.0	138.4	0.	YES	VHF	2	32.90	20
1115	101.0	110.0	0.	YES	VHF	2	20.78	20
1116	102.0	340.5	170.2	NO	UHF	20	645.00	20
1117	103.0	317.2	158.6	NO	UHF	30	560.00	20
1118	103.0	129.5	0.	YES	VHF	4	28.80	20
1119	104.0	494.1	247.1	NO	UHF	18	1358.70	20
1120	106.0	328.0	164.0	NO	UHF	29	598.70	20
1121	106.0	184.6	0.	YES	VHF	12	58.50	20
1122	106.0	299.0	117.4	NO	VHF	10	153.50	20
1123	107.0	150.0	0.	YES	VHF	13	38.64	20
1124	107.0	318.1	125.0	NO	VHF	8	173.80	20
1125	109.0	448.6	224.3	NO	UHF	31	1120.00	20
1126	110.0	332.2	130.5	NO	VHF	8	189.50	20
1127	112.0	247.2	123.6	NO	UHF	21	339.90	20
1128	112.0	575.0	287.5	NO	UHF	40	1840.00	20
1129	113.0	377.3	188.6	NO	UHF	22	792.00	20
1130	117.0	170.9	0.	YES	UHF	50	162.50	20
1131	117.0	148.4	0.	YES	VHF	13	37.80	20
1132	119.0	217.6	0.	YES	UHF	23	263.40	20
1133	120.0	465.0	232.5	NO	UHF	21	1203.00	20
1134	121.0	282.4	141.2	NO	UHF	15	443.60	20
1135	123.0	226.5	0.	YES	UHF	32	285.50	20
1136	125.0	150.3	0.	YES	VHF	6	38.82	20
1137	126.0	225.5	0.	YES	UHF	29	283.00	20
1138	129.0	237.9	0.	YES	VHF	9	97.20	20

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
1139	132.0	186.3	0.	YES	VHF	13	59.60	20
1140	134.0	224.8	0.	YES	VHF	7	86.80	20
1141	135.0	240.9	0.	YES	UHF	35	323.00	20
1142	135.0	145.0	0.	YES	VHF	10	36.12	20
1143	138.0	235.4	0.	YES	UHF	21	308.40	20
1144	140.0	214.5	0.	YES	VHF	12	79.00	20
1145	140.0	716.1	358.0	NO	UHF	39	2853.00	20
1146	140.0	416.7	208.3	NO	UHF	58	966.00	20
1147	141.0	373.2	186.6	NO	UHF	60	775.00	20
1148	143.0	435.6	217.8	NO	UHF	23	1056.00	20
1149	144.0	509.6	254.8	NO	UHF	38	1445.00	20
1150	149.0	186.9	0.	YES	VHF	4	60.00	20
1151	150.0	266.6	0.	YES	UHF	34	395.40	20
1152	151.0	178.0	0.	YES	VHF	3	54.40	20
1153	153.0	248.0	0.	YES	VHF	7	105.60	20
1154	155.0	317.8	158.9	NO	UHF	16	561.80	20
1155	157.0	291.9	0.	YES	VHF	9	146.30	20
1156	158.0	273.0	0.	YES	VHF	11	128.00	20
1157	159.0	484.0	242.0	NO	UHF	52	1303.40	20
1158	160.0	179.0	0.	YES	VHF	6	55.00	20
1159	160.0	259.7	0.	YES	UHF	40	375.40	20
1160	161.0	356.0	178.0	NO	UHF	14	705.30	20
1161	162.0	495.7	247.9	NO	UHF	36	1367.50	20
1162	163.0	174.8	0.	YES	VHF	6	52.50	20
1163	167.0	224.3	0.	YES	VHF	11	86.40	20
1164	167.0	195.9	0.	YES	VHF	9	65.90	20
1165	167.0	235.1	0.	YES	VHF	7	94.90	20
1166	168.0	232.4	0.	YES	UHF	42	300.40	20
1167	170.0	224.0	0.	YES	VHF	13	86.20	20
1168	172.0	480.6	240.3	NO	UHF	22	1285.00	20
1169	173.0	396.2	198.1	NO	UHF	23	873.30	20
1170	174.0	228.2	0.	YES	VHF	12	89.40	20
1171	178.0	288.4	0.	YES	VHF	8	142.80	20
1172	178.0	179.0	0.	YES	VHF	3	55.00	20
1173	180.0	190.0	0.	YES	VHF	7	62.00	20
1174	182.0	381.3	190.7	NO	UHF	46	809.00	20
1175	182.0	303.3	0.	YES	VHF	10	158.00	20
1176	184.0	315.5	0.	YES	VHF	7	170.90	20
1177	185.0	368.4	0.	YES	UHF	19	755.00	20
1178	185.0	318.1	0.	YES	VHF	9	173.80	20
1179	187.5	244.3	0.	YES	UHF	25	332.10	20
1180	190.0	428.2	214.1	NO	UHF	29	1020.00	20
1181	191.0	243.0	0.	YES	UHF	15	328.70	20
1182	194.0	317.6	0.	YES	VHF	10	173.20	20
1183	195.0	336.9	0.	YES	UHF	14	631.40	20
1184	195.0	278.8	0.	YES	UHF	40	432.60	20
1185	198.0	317.8	0.	YES	VHF	10	173.40	20
1186	198.0	303.3	0.	YES	VHF	13	158.00	20
1187	200.0	249.7	0.	YES	UHF	47	346.80	20
1188	201.0	332.3	0.	YES	VHF	8	189.60	20
1189	203.0	316.2	0.	YES	VHF	9	171.70	20
1190	203.0	276.7	0.	YES	VHF	7	131.50	20

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
1191	205.0	348.6	0.	YES	UHF	18	676.00	20
1192	205.0	253.1	0.	YES	VHF	10	110.00	20
1193	207.0	254.8	0.	YES	VHF	10	111.50	20
1194	208.0	303.3	0.	YES	VHF	9	158.00	20
1195	211.0	670.3	335.1	NO	UHF	20	2500.00	20
1196	212.0	534.0	267.0	NO	UHF	26	1586.40	20
1197	214.0	497.1	248.6	NO	UHF	50	1375.00	20
1198	214.0	306.7	0.	YES	VHF	8	161.50	20
1199	214.0	332.2	0.	YES	VHF	8	189.50	20
1200	214.0	309.4	0.	YES	VHF	12	164.40	20
1201	215.0	320.5	0.	YES	VHF	7	176.40	20
1202	215.0	480.6	240.3	NO	UHF	14	1285.00	20
1203	219.0	296.3	0.	YES	VHF	13	150.80	20
1204	219.0	520.2	260.1	NO	UHF	26	1505.60	20
1205	222.0	533.0	266.5	NO	UHF	47	1581.00	20
1206	225.0	255.3	0.	YES	UHF	15	362.80	20
1207	225.0	348.5	0.	YES	UHF	17	675.80	20
1208	226.0	294.2	0.	YES	VHF	7	148.60	20
1209	226.0	255.9	0.	YES	VHF	13	112.50	20
1210	231.0	510.5	255.2	NO	UHF	17	1450.00	20
1211	232.0	521.7	260.8	NO	UHF	30	1514.40	20
1212	242.0	310.1	0.	YES	UHF	15	535.00	20
1213	242.0	453.6	0.	YES	UHF	33	1145.00	20
1214	248.0	670.3	335.1	NO	UHF	17	2500.00	20
1215	249.0	317.3	0.	YES	VHF	11	172.90	20
1216	256.0	274.5	0.	YES	UHF	45	419.40	20
1217	261.0	340.5	0.	YES	UHF	29	645.00	20
1218	276.0	311.1	0.	YES	VHF	10	166.20	20
1219	276.0	319.1	0.	YES	VHF	8	174.90	20
1220	280.0	317.6	0.	YES	VHF	12	173.20	20
1221	281.0	286.0	0.	YES	VHF	11	140.50	20
1222	281.0	377.5	0.	YES	UHF	24	793.00	20
1223	282.0	630.6	315.3	NO	UHF	48	2213.00	20
1224	284.0	497.8	0.	YES	UHF	21	1379.00	20
1225	290.5	318.6	0.	YES	VHF	13	174.30	20
1226	298.5	368.8	0.	YES	UHF	33	757.00	20
1227	299.0	301.8	0.	YES	VHF	12	156.40	20
1228	300.0	313.8	0.	YES	VHF	9	169.10	20
1229	305.0	336.8	0.	YES	UHF	31	631.00	20
1230	305.0	332.5	0.	YES	UHF	21	615.00	20
1231	306.0	416.7	0.	YES	UHF	68	966.00	20
1232	306.0	612.7	306.4	NO	UHF	19	2089.10	20
1233	315.0	468.2	0.	YES	UHF	35	1219.70	20
1234	320.0	486.7	0.	YES	UHF	53	1318.00	20
1235	323.0	468.2	0.	YES	UHF	28	1220.00	20
1236	359.0	432.3	0.	YES	UHF	22	1040.00	20
1237	360.0	380.6	0.	YES	UHF	43	806.00	20
1238	361.0	361.2	0.	YES	UHF	58	726.10	20
1239	370.0	375.0	0.	YES	UHF	31	782.50	20
1240	414.0	626.8	0.	YES	UHF	67	2186.00	20
1241	459.0	520.8	0.	YES	UHF	24	1509.00	20
1242	460.0	496.9	0.	YES	UHF	16	1374.00	20

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
1243	460.0	480.6	0.	YES	UHF	27	1285.00	20
1244	469.0	469.2	0.	YES	UHF	50	1225.00	20
1245	478.0	516.4	0.	YES	UHF	24	1484.00	20
1246	490.0	612.1	0.	YES	UHF	22	2085.00	20
1247	616.0	628.1	0.	YES	UHF	19	2195.00	20
1248	666.0	670.3	0.	YES	UHF	45	2500.00	20
1249	30.0	66.9	0.	YES	VHF	12	19.24	50
1250	30.0	44.1	0.	YES	VHF	3	8.34	50
1251	30.0	32.3	0.	YES	VHF	3	4.48	50
1252	30.0	41.6	0.	YES	VHF	13	7.42	50
1253	30.0	64.4	0.	YES	VHF	7	17.82	50
1254	30.0	95.7	37.6	NO	VHF	10	39.34	50
1255	30.0	66.2	0.	YES	VHF	10	18.84	50
1256	30.0	32.7	0.	YES	VHF	13	4.60	50
1257	30.0	151.7	59.6	NO	VHF	11	98.80	50
1258	30.0	133.6	66.8	NO	UHF	51	248.40	50
1259	30.0	159.3	79.6	NO	UHF	53	352.80	50
1260	30.0	116.2	45.7	NO	VHF	9	58.00	50
1261	30.0	104.7	41.1	NO	VHF	10	47.08	50
1262	40.0	132.5	52.1	NO	VHF	11	75.40	50
1263	42.0	49.1	0.	YES	VHF	4	10.36	50
1264	49.0	84.6	0.	YES	VHF	2	30.72	50
1265	50.0	150.0	58.9	NO	VHF	8	96.60	50
1266	50.0	117.6	0.	YES	VHF	8	59.40	50
1267	56.0	147.5	73.7	NO	UHF	33	302.50	50
1268	56.0	126.2	0.	YES	VHF	7	68.40	50
1269	66.0	72.3	0.	YES	VHF	3	22.44	50
1270	67.0	126.7	0.	YES	VHF	12	68.90	50
1271	69.0	115.7	0.	YES	VHF	12	57.50	50
1272	70.0	91.7	0.	YES	VHF	8	36.12	50
1273	71.0	125.8	0.	YES	VHF	8	68.00	50
1274	71.0	180.1	0.	YES	VHF	12	139.30	50
1275	73.0	102.0	0.	YES	VHF	13	44.64	50
1276	74.0	183.4	0.	YES	VHF	12	144.40	50
1277	76.0	209.8	82.4	NO	VHF	7	188.90	50
1278	79.0	227.5	113.8	NO	UHF	57	720.00	50
1279	83.0	198.5	0.	YES	VHF	13	169.20	50
1280	84.0	130.0	0.	YES	UHF	36	235.20	50
1281	84.0	129.4	0.	YES	VHF	10	71.90	50
1282	85.0	190.9	0.	YES	VHF	10	156.40	50
1283	89.0	118.2	0.	YES	VHF	5	60.00	50
1284	90.0	111.3	0.	YES	UHF	42	172.20	50
1285	90.0	100.7	0.	YES	VHF	5	43.58	50
1286	97.0	187.1	0.	YES	UHF	54	486.80	50
1287	97.0	150.1	0.	YES	UHF	47	313.40	50
1288	99.0	316.9	158.5	NO	UHF	51	1397.00	50
1289	102.0	215.3	107.7	NO	UHF	20	645.00	50
1290	103.0	200.6	0.	YES	UHF	30	560.00	50
1291	104.0	312.5	156.3	NO	UHF	18	1358.70	50
1292	106.0	189.1	0.	YES	VHF	10	153.50	50
1293	106.0	207.5	0.	YES	UHF	29	598.70	50
1294	106.0	116.7	0.	YES	VHF	12	58.50	50

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
1295	107.0	201.2	0.	YES	VHF	8	173.80	50
1296	109.0	283.7	141.9	NO	UHF	31	1120.00	50
1297	110.0	210.1	0.	YES	VHF	8	189.50	50
1298	112.0	363.7	181.8	NO	UHF	40	1840.00	50
1299	112.0	156.3	0.	YES	UHF	21	339.90	50
1300	113.0	238.6	119.3	NO	UHF	22	792.00	50
1301	119.0	137.6	0.	YES	UHF	23	263.40	50
1302	120.0	294.1	147.0	NO	UHF	21	1203.00	50
1303	121.0	178.6	0.	YES	UHF	15	443.60	50
1304	123.0	143.3	0.	YES	UHF	32	285.50	50
1305	126.0	142.6	0.	YES	UHF	29	283.00	50
1306	129.0	150.5	0.	YES	VHF	9	97.20	50
1307	134.0	142.2	0.	YES	VHF	7	86.80	50
1308	135.0	152.4	0.	YES	UHF	35	323.00	50
1309	138.0	148.9	0.	YES	UHF	21	308.40	50
1310	140.0	452.9	226.4	NO	UHF	39	2853.00	50
1311	140.0	263.5	0.	YES	UHF	58	966.00	50
1312	141.0	236.0	0.	YES	UHF	60	775.00	50
1313	143.0	275.5	0.	YES	UHF	23	1056.00	50
1314	144.0	322.3	161.1	NO	UHF	38	1445.00	50
1315	150.0	168.6	0.	YES	UHF	34	395.40	50
1316	153.0	156.8	0.	YES	VHF	7	105.60	50
1317	155.0	201.0	0.	YES	UHF	16	561.80	50
1318	157.0	184.6	0.	YES	VHF	9	146.30	50
1319	158.0	172.7	0.	YES	VHF	11	128.00	50
1320	159.0	306.1	0.	YES	UHF	52	1303.40	50
1321	160.0	164.3	0.	YES	UHF	40	375.40	50
1322	161.0	225.2	0.	YES	UHF	14	705.30	50
1323	162.0	313.5	0.	YES	UHF	36	1367.50	50
1324	172.0	303.9	0.	YES	UHF	22	1285.00	50
1325	173.0	250.6	0.	YES	UHF	23	873.30	50
1326	178.0	182.4	0.	YES	VHF	8	142.80	50
1327	182.0	191.8	0.	YES	VHF	10	158.00	50
1328	182.0	241.2	0.	YES	UHF	46	809.00	50
1329	184.0	199.5	0.	YES	VHF	7	170.90	50
1330	185.0	233.0	0.	YES	UHF	19	755.00	50
1331	185.0	201.2	0.	YES	VHF	9	173.80	50
1332	190.0	270.8	0.	YES	UHF	29	1020.00	50
1333	194.0	200.9	0.	YES	VHF	10	173.20	50
1334	195.0	213.0	0.	YES	UHF	14	631.40	50
1335	198.0	201.0	0.	YES	VHF	10	173.40	50
1336	201.0	210.1	0.	YES	VHF	8	189.60	50
1337	205.0	220.4	0.	YES	UHF	18	676.00	50
1338	211.0	423.9	212.0	NO	UHF	20	2500.00	50
1339	212.0	337.7	0.	YES	UHF	26	1586.40	50
1340	214.0	314.4	0.	YES	UHF	50	1375.00	50
1341	215.0	303.9	0.	YES	UHF	14	1285.00	50
1342	219.0	329.0	0.	YES	UHF	26	1505.60	50
1343	222.0	337.1	0.	YES	UHF	47	1581.00	50
1344	231.0	322.9	0.	YES	UHF	17	1450.00	50
1345	232.0	329.9	0.	YES	UHF	30	1514.40	50
1346	242.0	286.9	0.	YES	UHF	33	1145.00	50

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
1347	248.0	423.9	0.	YES	UHF	17	2500.00	50
1348	282.0	398.9	0.	YES	UHF	48	2213.00	50
1349	284.0	314.9	0.	YES	UHF	21	1379.00	50
1350	306.0	387.5	0.	YES	UHF	19	2089.10	50
1351	30.0	52.6	0.	YES	VHF	7	17.82	75
1352	30.0	33.9	0.	YES	VHF	13	7.42	75
1353	30.0	109.1	54.6	NO	UHF	51	248.40	75
1354	30.0	130.0	65.0	NO	UHF	53	352.80	75
1355	30.0	94.9	37.3	NO	VHF	9	58.00	75
1356	30.0	123.9	48.7	NO	VHF	11	98.80	75
1357	30.0	54.7	0.	YES	VHF	12	19.24	75
1358	30.0	85.5	33.6	NO	VHF	10	47.08	75
1359	30.0	36.0	0.	YES	VHF	3	8.34	75
1360	30.0	78.2	30.7	NO	VHF	10	39.34	75
1361	30.0	54.1	0.	YES	VHF	10	18.84	75
1362	40.0	108.2	42.5	NO	VHF	11	75.40	75
1363	49.0	69.1	0.	YES	VHF	2	30.72	75
1364	50.0	122.5	0.	YES	VHF	8	96.60	75
1365	50.0	96.0	0.	YES	VHF	8	59.40	75
1366	56.0	103.1	0.	YES	VHF	7	68.40	75
1367	56.0	120.4	60.2	NO	UHF	33	302.50	75
1368	67.0	103.4	0.	YES	VHF	12	68.90	75
1369	69.0	94.5	0.	YES	VHF	12	57.50	75
1370	70.0	74.9	0.	YES	VHF	8	36.12	75
1371	71.0	147.1	0.	YES	VHF	12	139.30	75
1372	71.0	102.8	0.	YES	VHF	8	68.00	75
1373	73.0	83.3	0.	YES	VHF	13	44.64	75
1374	74.0	149.7	0.	YES	VHF	12	144.40	75
1375	76.0	171.3	0.	YES	VHF	7	188.90	75
1376	79.0	185.8	92.9	NO	UHF	57	720.00	75
1377	83.0	162.1	0.	YES	VHF	13	169.20	75
1378	84.0	106.2	0.	YES	UHF	36	235.20	75
1379	84.0	105.7	0.	YES	VHF	10	71.90	75
1380	85.0	155.8	0.	YES	VHF	10	156.40	75
1381	89.0	96.5	0.	YES	VHF	5	60.00	75
1382	90.0	90.8	0.	YES	UHF	42	172.20	75
1383	97.0	152.7	0.	YES	UHF	54	486.80	75
1384	97.0	122.6	0.	YES	UHF	47	313.40	75
1385	99.0	258.7	129.4	NO	UHF	51	1397.00	75
1386	102.0	175.8	0.	YES	UHF	20	645.00	75
1387	103.0	163.8	0.	YES	UHF	30	560.00	75
1388	104.0	255.2	127.6	NO	UHF	18	1358.70	75
1389	106.0	169.4	0.	YES	UHF	29	598.70	75
1390	106.0	154.4	0.	YES	VHF	10	153.50	75
1391	107.0	164.3	0.	YES	VHF	8	173.80	75
1392	109.0	231.7	115.8	NO	UHF	31	1120.00	75
1393	110.0	171.5	0.	YES	VHF	8	189.50	75
1394	112.0	127.6	0.	YES	UHF	21	339.90	75
1395	112.0	297.0	148.5	NO	UHF	40	1840.00	75
1396	113.0	194.8	0.	YES	UHF	22	792.00	75
1397	120.0	240.1	120.1	NO	UHF	21	1203.00	75
1398	121.0	145.8	0.	YES	UHF	15	443.60	75

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
1399	140.0	369.8	184.9	NO	UHF	39	2853.00	75
1400	140.0	215.2	0.	YES	UHF	58	966.00	75
1401	141.0	192.7	0.	YES	UHF	60	775.00	75
1402	143.0	225.0	0.	YES	UHF	23	1056.00	75
1403	144.0	263.2	0.	YES	UHF	38	1445.00	75
1404	155.0	164.1	0.	YES	UHF	16	561.80	75
1405	159.0	249.9	0.	YES	UHF	52	1303.40	75
1406	161.0	183.9	0.	YES	UHF	14	705.30	75
1407	162.0	256.0	0.	YES	UHF	36	1367.50	75
1408	172.0	248.2	0.	YES	UHF	22	1285.00	75
1409	173.0	204.6	0.	YES	UHF	23	873.30	75
1410	182.0	196.9	0.	YES	UHF	46	809.00	75
1411	185.0	190.2	0.	YES	UHF	19	755.00	75
1412	190.0	221.1	0.	YES	UHF	29	1020.00	75
1413	211.0	346.1	0.	YES	UHF	20	2500.00	75
1414	212.0	275.7	0.	YES	UHF	26	1586.40	75
1415	214.0	256.7	0.	YES	UHF	50	1375.00	75
1416	215.0	248.2	0.	YES	UHF	14	1285.00	75
1417	219.0	268.6	0.	YES	UHF	26	1505.60	75
1418	222.0	275.3	0.	YES	UHF	47	1581.00	75
1419	231.0	263.6	0.	YES	UHF	17	1450.00	75
1420	232.0	269.4	0.	YES	UHF	30	1514.40	75
1421	248.0	346.1	0.	YES	UHF	17	2500.00	75
1422	282.0	325.7	0.	YES	UHF	48	2213.00	75
1423	306.0	316.4	0.	YES	UHF	19	2089.10	75
1424	30.0	45.6	0.	YES	VHF	7	17.82	100
1425	30.0	47.3	0.	YES	VHF	12	19.24	100
1426	30.0	82.2	32.3	NO	VHF	9	58.00	100
1427	30.0	74.0	0.	YES	VHF	10	47.08	100
1428	30.0	31.2	0.	YES	VHF	3	8.34	100
1429	30.0	107.3	42.1	NO	VHF	11	98.80	100
1430	30.0	67.7	0.	YES	VHF	10	39.34	100
1431	30.0	46.8	0.	YES	VHF	10	18.84	100
1432	30.0	94.5	47.2	NO	UHF	51	248.40	100
1433	30.0	112.6	56.3	NO	UHF	53	352.80	100
1434	40.0	93.7	0.	YES	VHF	11	75.40	100
1435	49.0	59.8	0.	YES	VHF	2	30.72	100
1436	50.0	83.2	0.	YES	VHF	8	59.40	100
1437	50.0	106.1	0.	YES	VHF	8	96.60	100
1438	56.0	89.3	0.	YES	VHF	7	68.40	100
1439	56.0	104.3	0.	YES	UHF	33	302.50	100
1440	67.0	89.6	0.	YES	VHF	12	68.90	100
1441	69.0	81.8	0.	YES	VHF	12	57.50	100
1442	71.0	89.0	0.	YES	VHF	8	68.00	100
1443	71.0	127.4	0.	YES	VHF	12	139.30	100
1444	74.0	129.7	0.	YES	VHF	12	144.40	100
1445	76.0	148.3	0.	YES	VHF	7	188.90	100
1446	79.0	160.9	80.4	NO	UHF	57	720.00	100
1447	83.0	140.4	0.	YES	VHF	13	169.20	100
1448	84.0	91.9	0.	YES	UHF	36	235.20	100
1449	84.0	91.5	0.	YES	VHF	10	71.90	100
1450	85.0	135.0	0.	YES	VHF	10	156.40	100

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
1451	97.0	132.3	0.	YES	UHF	54	486.80	100
1452	97.0	106.1	0.	YES	UHF	47	313.40	100
1453	99.0	224.1	112.0	NO	UHF	51	1397.00	100
1454	102.0	152.3	0.	YES	UHF	20	645.00	100
1455	103.0	141.9	0.	YES	UHF	30	560.00	100
1456	104.0	221.0	110.5	NO	UHF	18	1358.70	100
1457	106.0	133.7	0.	YES	VHF	10	153.50	100
1458	106.0	146.7	0.	YES	UHF	29	598.70	100
1459	107.0	142.3	0.	YES	VHF	8	173.80	100
1460	109.0	200.6	0.	YES	UHF	31	1120.00	100
1461	110.0	148.6	0.	YES	VHF	8	189.50	100
1462	112.0	257.2	128.6	NO	UHF	40	1840.00	100
1463	113.0	168.7	0.	YES	UHF	22	792.00	100
1464	120.0	207.9	0.	YES	UHF	21	1203.00	100
1465	121.0	126.3	0.	YES	UHF	15	443.60	100
1466	140.0	186.3	0.	YES	UHF	58	966.00	100
1467	140.0	320.2	160.1	NO	UHF	39	2853.00	100
1468	141.0	166.9	0.	YES	UHF	60	775.00	100
1469	143.0	194.8	0.	YES	UHF	23	1056.00	100
1470	144.0	227.9	0.	YES	UHF	38	1445.00	100
1471	159.0	216.4	0.	YES	UHF	52	1303.40	100
1472	162.0	221.7	0.	YES	UHF	36	1367.50	100
1473	172.0	214.9	0.	YES	UHF	22	1285.00	100
1474	173.0	177.2	0.	YES	UHF	23	873.30	100
1475	190.0	191.5	0.	YES	UHF	29	1020.00	100
1476	211.0	299.8	0.	YES	UHF	20	2500.00	100
1477	212.0	238.8	0.	YES	UHF	26	1586.40	100
1478	214.0	222.3	0.	YES	UHF	50	1375.00	100
1479	219.0	232.6	0.	YES	UHF	26	1505.60	100
1480	222.0	238.4	0.	YES	UHF	47	1581.00	100
1481	232.0	233.3	0.	YES	UHF	30	1514.40	100
1482	248.0	299.8	0.	YES	UHF	17	2500.00	100
1483	282.0	282.0	0.	YES	UHF	48	2213.00	100
1484	30.0	75.8	0.	YES	VHF	11	98.80	200
1485	30.0	52.4	0.	YES	VHF	10	47.08	200
1486	30.0	33.5	0.	YES	VHF	12	19.24	200
1487	30.0	58.1	0.	YES	VHF	9	58.00	200
1488	30.0	47.9	0.	YES	VHF	10	39.34	200
1489	30.0	32.2	0.	YES	VHF	7	17.82	200
1490	30.0	66.8	33.4	NO	UHF	51	248.40	200
1491	30.0	79.6	39.8	NO	UHF	53	352.80	200
1492	30.0	33.1	0.	YES	VHF	10	18.84	200
1493	40.0	66.3	0.	YES	VHF	11	75.40	200
1494	50.0	75.0	0.	YES	VHF	8	96.60	200
1495	50.0	58.8	0.	YES	VHF	8	59.40	200
1496	56.0	73.7	0.	YES	UHF	33	302.50	200
1497	56.0	63.1	0.	YES	VHF	7	68.40	200
1498	71.0	90.1	0.	YES	VHF	12	139.30	200
1499	74.0	91.7	0.	YES	VHF	12	144.40	200
1500	76.0	104.9	0.	YES	VHF	7	188.90	200
1501	79.0	113.8	0.	YES	UHF	57	720.00	200
1502	83.0	99.3	0.	YES	VHF	13	169.20	200

TABLE C-1 CONT NUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
1503	85.0	95.4	0.	YES	VHF	10	156.40	200
1504	99.0	158.5	0.	YES	UHF	51	1397.00	200
1505	102.0	107.7	0.	YES	UHF	20	645.00	200
1506	104.0	156.3	0.	YES	UHF	18	1358.70	200
1507	109.0	141.9	0.	YES	UHF	31	1120.00	200
1508	112.0	181.8	0.	YES	UHF	40	1840.00	200
1509	113.0	119.3	0.	YES	UHF	22	792.00	200
1510	120.0	147.0	0.	YES	UHF	21	1203.00	200
1511	140.0	226.4	0.	YES	UHF	39	2853.00	200
1512	144.0	161.1	0.	YES	UHF	38	1445.00	200
1513	211.0	212.0	0.	YES	UHF	20	2500.00	200
1514	30.0	54.6	0.	YES	UHF	51	248.40	300
1515	30.0	61.9	0.	YES	VHF	11	98.80	300
1516	30.0	47.5	0.	YES	VHF	9	58.00	300
1517	30.0	42.8	0.	YES	VHF	10	47.08	300
1518	30.0	39.1	0.	YES	VHF	10	39.34	300
1519	30.0	65.0	32.5	NO	UHF	53	352.80	300
1520	40.0	54.1	0.	YES	VHF	11	75.40	300
1521	50.0	61.2	0.	YES	VHF	8	96.60	300
1522	56.0	60.2	0.	YES	UHF	33	302.50	300
1523	71.0	73.5	0.	YES	VHF	12	139.30	300
1524	74.0	74.9	0.	YES	VHF	12	144.40	300
1525	76.0	85.6	0.	YES	VHF	7	188.90	300
1526	79.0	92.9	0.	YES	UHF	57	720.00	300
1527	99.0	129.4	0.	YES	UHF	51	1397.00	300
1528	104.0	127.6	0.	YES	UHF	18	1358.70	300
1529	109.0	115.8	0.	YES	UHF	31	1120.00	300
1530	112.0	148.5	0.	YES	UHF	40	1840.00	300
1531	120.0	120.1	0.	YES	UHF	21	1203.00	300
1532	140.0	184.9	0.	YES	UHF	39	2853.00	300
1533	30.0	37.0	0.	YES	VHF	10	47.08	400
1534	30.0	53.6	0.	YES	VHF	11	98.80	400
1535	30.0	33.8	0.	YES	VHF	10	39.34	400
1536	30.0	47.2	0.	YES	UHF	51	248.40	400
1537	30.0	56.3	0.	YES	UHF	53	352.80	400
1538	30.0	41.1	0.	YES	VHF	9	58.00	400
1539	40.0	46.9	0.	YES	VHF	11	75.40	400
1540	50.0	53.0	0.	YES	VHF	8	96.60	400
1541	79.0	80.4	0.	YES	UHF	57	720.00	400
1542	99.0	112.0	0.	YES	UHF	51	1397.00	400
1543	104.0	110.5	0.	YES	UHF	18	1358.70	400
1544	112.0	128.6	0.	YES	UHF	40	1840.00	400
1545	140.0	160.1	0.	YES	UHF	39	2853.00	400
1546	30.0	48.0	0.	YES	VHF	11	98.80	500
1547	30.0	30.3	0.	YES	VHF	10	39.34	500
1548	30.0	42.3	0.	YES	UHF	51	248.40	500
1549	30.0	33.1	0.	YES	VHF	10	47.08	500
1550	30.0	50.4	0.	YES	UHF	53	352.80	500
1551	30.0	36.8	0.	YES	VHF	9	58.00	500
1552	40.0	41.9	0.	YES	VHF	11	75.40	500
1553	99.0	100.2	0.	YES	UHF	51	1397.00	500
1554	112.0	115.0	0.	YES	UHF	40	1840.00	500

TABLE C-1 CONTINUED

SN	CTH	EATH	NATH	NACT	TYPE	CHNL	ERP	PD
1555	140.0	143.2	0.	YES	UHF	39	2853.00	500
1556	30.0	38.6	0.	YES	UHF	51	248.40	600
1557	30.0	30.2	0.	YES	VHF	10	47.08	600
1558	30.0	43.8	0.	YES	VHF	11	98.80	600
1559	30.0	33.6	0.	YES	VHF	9	58.00	600
1560	30.0	46.0	0.	YES	UHF	53	352.80	600
1561	30.0	35.7	0.	YES	UHF	51	248.40	700
1562	30.0	40.5	0.	YES	VHF	11	98.80	700
1563	30.0	42.6	0.	YES	UHF	53	352.80	700
1564	30.0	31.1	0.	YES	VHF	9	58.00	700
1565	30.0	33.4	0.	YES	UHF	51	248.40	800
1566	30.0	37.9	0.	YES	VHF	11	98.80	800
1567	30.0	39.8	0.	YES	UHF	53	352.80	800
1568	30.0	31.5	0.	YES	UHF	51	248.40	900
1569	30.0	35.8	0.	YES	VHF	11	98.80	900
1570	30.0	37.5	0.	YES	UHF	53	352.80	900
1571	30.0	33.9	0.	YES	VHF	11	98.80	1000
1572	30.0	35.6	0.	YES	UHF	53	352.80	1000

60 stations that require some modification to comply with the 100 μW/cm² guideline. A minimum compliance cost analysis is conducted for these 60 stations by considering three compliance alternatives:

1) taller tower, old antenna;
2) existing tower, new antenna; and
3) taller tower, new antenna.

In the following discussion, the first TV station at the 100 μW/cm² level will be examined in detail and then this example will be carried forward to all stations requiring a compliance measure if the guidance were to be established at this power density level. Television station number 1424 is the first in the list that is estimated by the EPA to require a compliance measure at 100 μW/cm². That is, its signal exceeds 100 μW/cm² at ground level. The analysis begins by selecting the least costly of three compliance measures. Column 3 gives the EATH as 45.6 ft; on the basis of the tower cost increments given in Table C-2, the medium-level cost of this measure, CEAT, is $76,000. The entry in Column 4 is 0, which means that a new antenna would achieve compliance without any elevation at all; so no tower would be required for compliance (a tower would still be required for broadcasting purposes). Column 5 indicates that a new antenna on the existing tower would achieve compliance; this, together with the new tower height in Column 4, provides the basis for estimating the cost of the second alternative measure, new antenna on the existing tower, CNAET. A new VHF-TV (Column 6) antenna at the medium-level cost is $480,000 (Table C-2), so CNAET = $480,000. Because a new antenna does not require a new tower, the third compliance measure, new antenna on a new tower, has no cost (i.e., CNANT = $0). To summarize the present costs,

CEAT = $76,000,
CNAET = $480,000, and
CNANT = $0.

Therefore, the minimum cost compliance measure for station 1424 is CEAT = $76,000.

This analysis can be performed for all stations in any power density group. Table C-3 gives such an analysis for all the TV stations in the 100 μW/cm² group, station numbers 1424 through 1483, inclusive. The first column in Table C-3 is the station number; the second column, EATH; the third column is the cost of this new tower, from Table C-2 for the closest higher corresponding height. The fourth column is NATH; the fifth column, CNAT, is the cost of the new antenna tower from Table C-2. If a taller tower is not required with a new antenna, this cost is zero; the sixth column identifies

Table C-2. Costs of compliance measures for TV broadcast stations.[a]

a. Survey of electromagnetic environment around tower to determine compliance with guideline and need for compliance measure.

	Cost per station		
	Low	Medium	High
Survey	$1,500	$2,000	$2,500

b. New Antenna.

	Cost per station		
	Low	Medium	High
VHF-TV	$240,000	$480,000	$960,000
UHF-TV	150,000	300,000	600,000

c. Tower replacement.

	Cost per station		
Height of new tower (ft)	Low	Medium	High
100	$ 57,000	$ 76,000	$ 83,600
200	120,000	160,000	176,000
300	174,000	232,000	255,000
400	262,500	350,000	385,000
500	360,000	480,000	528,000
600	270,000	360,000	396,000
700	307,500	410,000	451,000
800	343,500	450,000	503,800
900	396,750	529,000	581,900
1000	483,750	645,000	709,500
2000	1,875,000	2,500,000	2,750,000

[a] From Table 11, Vol. 1.

whether or not a new antenna on the existing tower will be sufficient to comply. The seventh column lists the type of antenna required and the eighth column provides the cost from Table C-2. Column 9 is the result of the first minimum-cost test, the lesser of CNANT (Column 5 + Column 8) and CNAET (Column 8 with Column 6 = yes and Column 4 = 0.0). The last column shows the results of a second minimum cost test, the lesser of the results of the first test (Column 9) and CEAT (Column 3); this is the minimum compliance cost for the station.

The total cost of compliance for all sixty stations sums to $9,586,000. This is combined with the survey cost to obtain the total cost of compliance, the annual cash flow over five years, and the present value. The present value is estimated by applying a 10% discount rate to the annual cash flow cost over five years. Listed below is the total cost to society-at-large derived from this information:

Table C-3. A sample calculation of the minimum cost of compliance with guidelines limiting public exposure to radiofrequency radiation from VHF-TV and UHF-TV sources is given for the 100 μW/cm² guidance of the medium-cost level.

STN # 1	EATH 2	CEAT 3	NATH 4	CNAT 5	1=YES 2=NO NACT 6	1=UHF 2=VHF ANT TYPE 7	CNA 8	THE LESSER OF COL 5 AND COL 5+8 9	THE LESSER OF COL 3 AND COL 9 10
1424	46	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1425	47	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1426	82	$76,000	32	$76,000	2	2	$480,000	$556,000	$76,000
1427	74	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1428	31	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1429	107	$160,000	42	$76,000	2	2	$480,000	$556,000	$160,000
1430	68	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1431	47	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1432	95	$76,000	47	$76,000	2	1	$300,000	$376,000	$76,000
1433	113	$160,000	56	$76,000	2	1	$300,000	$376,000	$160,000
1434	94	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1435	60	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1436	83	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1437	106	$160,000	0	$0	1	2	$480,000	$480,000	$160,000
1438	89	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1439	104	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1440	90	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1441	82	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1442	89	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1443	127	$160,000	0	$0	1	2	$480,000	$480,000	$160,000
1444	130	$160,000	0	$0	1	2	$480,000	$480,000	$160,000
1445	148	$160,000	0	$0	1	2	$480,000	$480,000	$160,000
1446	161	$160,000	80	$76,000	2	1	$300,000	$376,000	$160,000
1447	140	$160,000	0	$0	1	2	$480,000	$480,000	$160,000
1448	92	$76,000	0	$0	1	1	$300,000	$300,000	$76,000
1449	92	$76,000	0	$0	1	2	$480,000	$480,000	$76,000
1450	135	$160,000	0	$0	1	2	$480,000	$480,000	$160,000
1451	132	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1452	106	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1453	224	$232,000	112	$160,000	2	1	$300,000	$460,000	$232,000
1454	152	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1455	142	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1456	221	$232,000	111	$160,000	2	1	$300,000	$460,000	$232,000
1457	134	$160,000	0	$0	1	2	$480,000	$480,000	$160,000
1458	147	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1459	142	$160,000	0	$0	1	2	$480,000	$480,000	$160,000
1460	201	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1461	149	$160,000	0	$0	1	2	$480,000	$480,000	$160,000
1462	257	$232,000	129	$160,000	2	1	$300,000	$460,000	$232,000
1463	169	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1464	208	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1465	126	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1466	186	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1467	320	$350,000	160	$160,000	2	1	$300,000	$460,000	$350,000
1468	167	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1469	195	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1470	228	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1471	216	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1472	222	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1473	215	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1474	177	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1475	192	$160,000	0	$0	1	1	$300,000	$300,000	$160,000
1476	300	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1477	239	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1478	222	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1479	233	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1480	238	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1481	233	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1482	300	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
1483	282	$232,000	0	$0	1	1	$300,000	$300,000	$232,000
									$9,586,000

Total cost of compliance survey, TCS	$2,160,000
Total cost of compliance measures, TCC	9,586,000
Total gross cost of compliance, TGC = TCS + TCC	$11,746,000
Annual cash flow cost, ACF = TGC/5	$2,349,200
Present value, PV	$9,795,848

The annual cash flow cost is the total cost divided by five years. The present value is computed according to

$$PV = \sum_{k=1}^{5} ACF/1.1^{k-1} . \tag{C-1}$$

COST TO INDUSTRY

The cost to the TV broadcast industry of compliance with a guideline limiting public exposure to radiofrequency radiation includes the survey cost, the capital costs, and the costs of financing the measures taken to meet the exposure guideline. This section illustrates how the annual, total, and average cash flow, and the present value of the net after-tax costs are computed for the 100 $\mu W/cm^2$ guidance level. It is assumed that costs are spread evenly among five cohorts of stations and that loan amortization and interest payments continue for five years after initial installation of the equipment. Each cohort begins compliance the year after the preceding one; this results in costs to industry being distributed over a ten-year period. The inputs for this calculation are:

o Total cost of survey, TCS	$2,160,000
o Total cost of compliance measures, TCC	$9,586,000
o Down payment on compliance measures, DP	$2,396,500
o Amount borrowed (75% of total cost), TLP	$7,189,500
o Interest, IN(k)	0.10
o Repayment period	5 years
o Annual loan amortization, AM(k)	$1,437,900
o Effective tax rate	0.46
o Investment tax credit (10% of TCC)	$958,600

o Depreciation schedule

Year 1 0.15 (TP) = DPN(1)

Year 2 0.22 (TP) = DPN(2)

Year 3 0.21 (TP) = DPN(3)
Year 4 0.21 (TP) = DPN(4)
Year 5 0.21 (TP) = DPN(5)

- Expenses, year 0, EX(0) $2,160,000

Table C-4 provides a summary of the calculation of the annual cash flow over a period of five years based on the information provided above. The calculation considers the gross cash flow, tax shelter effect, and net cash flow that result from expenses, loan down payment, loan amortization, interest payments, depreciation, and investment tax credit. The annual loan amortization is the amount borrowed divided by five. The interest is assumed to be paid on the remaining balance at the end of each year. The only non-depreciable expense considered is that of the survey, which takes place in the first year. The tax effect of expenses, interest, and depreciation is determined by multiplying each of these factors by the effective tax rate. The investment tax credit is based on the value of the tangible property, the new tower and/or antenna, in the first year. The yearly gross cash flow is determined as follows:

$$\begin{aligned} GCF(k) &= DP(0) + TCS(0), \text{ for } k = 0 \text{ , or} \\ GCF(k) &= AM(k) + IN(k), \text{ for } k = 1 \text{ to } 5 \end{aligned} \tag{C-2}$$

where

GCF(k) = gross cash flow cost in year k,
DP(0) = down payment,
TCS(0) = total cost of survey,
AM(k) = loan amortization in year k,
IN(k) = interest payment in year k, and
k = year index, 0 = year of compliance; 1-5 = continued compliance costs.

The yearly tax shelter effect iis given by

$$\begin{aligned} TS(k) &= TREX(0) + ITC(0), \text{ for } k = 0, \text{ or} \\ TS(k) &= TRIN(k) + TRDPN(k), \text{ for } k = 1 \text{ to } 5 \text{ ,} \end{aligned} \tag{C-3}$$

Table C-4. A sample calculation of the costs to the TV broadcast industry of guidelines limiting public exposure to radiofrequency radiation is given for compliance with a 100 $\mu W/cm^2$ guidance at the medium-cost level. Numbers are in millions of dollars.

	Year					
Parameter	0	1	2	3	4	5
EX	$2.160					
DP	2.396					
AM		$7.189	$5.752	$4.314	$2.876	$1.438
IN		0.719	0.575	0.431	0.288	0.144
GCF	4.556	2.157	2.013	1.869	1.725	1.582
TREX	0.994					
TRIN		0.331	0.265	0.198	0.132	0.066
TRDPN		0.661	0.970	0.926	0.926	0.926
ITC	0.959					
TS	1.953	0.992	1.235	1.124	1.058	0.992
NCF	2.603	1.165	0.778	0.745	0.667	0.589
			Cohort costs			
CNCF	$0.521	$0.233	$0.150	$0.199	$0.133	$0.118

where

TS(k) = tax shelter in year k,
TREX(k) = 0.46 • Ex(k),
ITC = investment tax credit,
TRIN(k) = 0.46 • IN(k),
TRDPN(k) = 0.46 • DPN(k), and
k = year index, 0 to 5.

Table C-5. The cost to the TV broadcast industry of guidelines limiting public exposure to radiofrequency radiation is given for compliance with the 100 V/m guidance at the medium-cost level. Numbers are in millions of dollars.

	Year									
Cohort	0	1	2	3	4	5	6	7	8	9
CNCF 1	$0.521	$0.233	$0.156	$0.149	$0.133	$0.118				
CNCF 2		0.521	0.233	0.156	0.149	0.133	0.118			
CNCF 3			0.521	0.233	0.156	0.149	0.133	0.118		
CNCF 4				0.521	0.233	0.156	0.149	0.133	0.118	
CNCF 5					0.521	0.233	0.156	0.149	0.133	0.118
TNCF	$0.522	$0.754	$0.910	$1.059	$1.192	$0.789	$0.556	$0.400	$0.251	$0.118
ANCF =	$0.655									
PV =	$4.743									

The net cash flow in year k, NCF(k) is the difference between the gross cash flow GCF(k) and the tax shelter TS(k) and is given by

$$\mathrm{NCF}(k) = \mathrm{GCF}(k) - \mathrm{TS}(k)\,. \qquad \text{(C-4)}$$

Table C-4 shows how costs are calculated for a cohort of TV broadcast stations using the variables discussed above for compliance with the 100 $\mu W/cm^2$ guideline. The values in the last row of Table C-4 are shown for each cohort in Table C-5. The additional values shown in Tables C-4 and C-5 are computed as follows

$$\mathrm{CNCF}(k) = \mathrm{NCF}(k)/5\,, \qquad \text{(C-5)}$$

where

CNCF(k) = the cohort net cash flow cost in year k, and

NCF(k) = the industry net cash flow cost in year k.

The six years of cohort costs CNCF(k) for five cohorts are spread over a total of 10 years, as shown in Table C-5. The total cost for each year, TNCF(k), is the sum of the individual CNCF(k)s for a given year; because the five cohorts' expenses occur over six years and cohort compliance is staggered over five years, the costs to industry are spread over a 10 year period. See Table C-5.

$$\text{ANCF} = \left[\sum_{k=1}^{10} \text{TNCF}(k)\right]/10 . \qquad \text{(C-6)}$$

$$\text{PV} = \sum_{k=1}^{10} \text{TNCF}(k)/1.1^{k-1} , \qquad \text{(C-7)}$$

where

ANCF = the average annual net cash flow cost for the industry,

TNCF(k) = the total net cash flow cost for all five cohorts, and

PV = present value of the cost to industry.

EFFECTS ON THE AVERAGE PROFITABLE TV BROADCAST STATION

In this section, a sample calculation is presented of the cost of the $100\ \mu W/cm^2$ guideline to the average profitable TV broadcast station. The objective is to determine the net annual cost of compliance over a six year period. From this, the present value of the net cost of compliance is determined. It is assumed that the average profitable TV station has a yearly gross income of $2,380,000 throughout the period of analysis.

The average station gross cash flow cost of compliance is given by the expression

$$\text{AGCF}(k) = \text{ACS} + \text{ADP}, \text{ for } k = 0 \text{ , or} \qquad \text{(C-8)}$$
$$\text{AGCF}(k) = \text{AIN}(k) + \text{AAM}(k), \text{ for } k = 1 \text{ to } 5 \text{ ,}$$

where

AGCFC(k) = average gross cash flow cost in year k,

ACS(k) = cost of survey per station,

ADP(k) = average cost of the down payment per station,

AIN(k) = average interest cost in time period k per station,

AAM(k) = average amortization cost per station in year k, and

k = year index, 0 to 5.

The average down payment, interest, and amortization cost in each time period are obtained by using the corresponding values for the entire industry from Table C-3 and dividing by the number of stations required to take compliance measures, in the case of the $100\,\mu W/cm^2$, medium-cost-level, 60 (refer to Table C-1). In addition, the average station tax shelter from depreciation is obtained by dividing the industry value in Table C-3 by NSF, 60. The effect of averaging the costs in this manner is to create a weighted average cost over all compliance measures for the average firm. These calculations are summarized in Table C-6.

The average taxable operating income is given by

$$\begin{aligned} ATOI(0) &= AOIA(0) + ADP(0), \text{ for } k = 0 \text{ , or} \\ ATOI(k) &= AOIA(k) + AAM(k) - ADPN(k), \text{ for } k = 1 \text{ to } 5, \end{aligned} \tag{C-9}$$

where

ATOI(k) = average taxable operating income in year k,
AOIA(k) = average operating income after compliance in year k,
ADP(0) = average down payment in year 0,
AAM(k) = average amortization in year k,
ADPN(k) = average depreciation in year k, and
k = year index, 0 to 5.

In order to calculate tax savings the following corporate tax rates are applied

Income tax bracket ATOI Minimum	Maximum	Tax rate
\$0	\$25,000	$TR_1 = 0.15$
\$25,001	\$50,000	$TR_2 = 0.18$
\$50,001	\$75,000	$TR_3 = 0.30$
\$75,001	\$100,000	$TR_4 = 0.40$
\$100,001	No maximum	$TR_5 = 0.46$

Table C-6. A sample calculation of the costs to the average profitable TV broadcast station of guidelines limiting public exposure to radiofrequency radiation is given for compliance with the 100 μW/cm^2 guidance of the medium-cost level. Numbers are in thousands of dollars.

Item	Pre Guideline	Years of compliance expense 0	1	2	3	4	5
AOIB	$2,380	$2,380	$2,380	$2,380	$2,380	$2,380	$2,380
AGCF		42	36	34	31	29	26
AOIA	2,380	2,338	2,344	2,346	2,349	2351	2354
ADP/AAM		+40	+24	+24	+24	+24	+24
ADPN			-24	-35	-34	-34	-34
ATOI	2,380	2,378	2,344	2,335	2,339	2,342	2,344
AGT	1,074	1,074	1,058	1,054	1,056	1,057	1,058
AITC		+16					
ANT	-1,074	-1,058	-1,058	-1,054	-1,056	-1,057	-1,058
ANIA	$1,305	$1,280	$1,286	$1,292	$1,293	$1,294	$1,296
		Net annual cost of compliance					
AGCF		42	36	34	31	29	26
ATSA		-17	-17	-21	-19	-18	-17
NCC		$25	$20	$13	$13	$11	$10
ANCC	$15						
		Present value					
	Average	Cohort 1	Cohort 2	Cohort 3	Cohort 4	Cohort 5	
PV	$64	$76	$70	$63	$57	$52	

The average gross tax is given by:

Taxable income bracket	Tax formula	
for $ATOI(k) > \$100,000$	$AGT(k) = \$25,000\,(TR_1+TR_2+TR_3+TR_4) + TR_5\,(ATOI(k) - \$100,000)$,	(C-10)
for $\$75,000 < ATOI(k) \le \$100,000$	$AGT(k) = \$25,000\,(TR_1+TR_2+TR_3) + TR_4\,(ATOI(k) - \$75,000)$,	(C-11)
for $\$50,000 < ATOI(k) \le \$75,000$	$AGT(k) = \$25,000\,(TR_1+TR_2) + TR_3\,(ATOI(k) - \$50,000)$,	(C-12)
for $\$25,000 < ATOI(k) \le \$50,000$	$AGT(k) = \$25,000(TR_1) + TR_2\,(ATOI(k) - \$25,000)$,	(C-13)
for $ATOI(k) \le \$25,000$	$AGT(k) = ATOI(k)\ TR_1$,	(C-14)

where

$AGT(k)$ = average gross tax in year k,

$ATOI(k)$ = average taxable operating income in year k, and

TR_j = tax rate for income bracket j.

The average gross tax is given in Table C-5 for each time period. The net tax, ANT(k), also given in C-5, is obtained by subtracting the average station investment tax credit, \$959.6/60 = \$16, from the gross tax in year 0.

The average net operating income after tax, ANIA(k), in year k is given by

$$ANIA(k) = AOIA(k) - ANT(k), \text{ for } k = 0 \text{ to } 5\ , \qquad \text{(C-15)}$$

where

$AOIA(k)$ = average income after compliance and before taxes in year k, and

$ANT(k)$ = average net tax in year k.

The average tax savings in year k, ATSA(k), is given by

$$ATSA(k) = ANTB - ANT(k) \qquad \text{(C-16)}$$

where

ANTB = average net tax in the year prior to the guideline, and
ANT(k) = average net tax in year k.

The annual net cost of compliance, NCC(k), in year k is

$$NCC(k) = AGCF(k) - ATSA(k)\ , \tag{C-17}$$

where

AGCF(k) = the average gross cash flow cost of compliance in year k, and
ATSA(k) = the average tax savings in year k.

The average annual net cost is the sum of the yearly net costs, $91,000, divided by six years, or $15,200 per year.

The present value, PV, is obtained from the expression

$$PV = \sum_{k=1}^{5} NCC(k)/1.1^{k-1}\ , \tag{C-18}$$

where

PV = present value, and
NCC(k) = annual net cost of compliance in year k.

However, this is the present value of the cost of compliance for a firm in the first cohort only. For a firm in the cth cohort the present value is given by the expression

$$PV(c) \sum_{k=1}^{5} NCC(k)/(1.1)^{k-2+c}\ , \tag{C-19}$$

where

PV(c) = the present value of the cost of compliance for a firm in the cth cohort, and
NCC(k) = the annual net cost of compliance for the average firm.

The average present value, APV, is obtained by calculating the mean of the cohort present values

$$APV = \sum_{c=1}^{5} PV(c)\ /5\ . \tag{C-20}$$

APPENDIX D

COST ESTIMATES FOR FM STATIONS

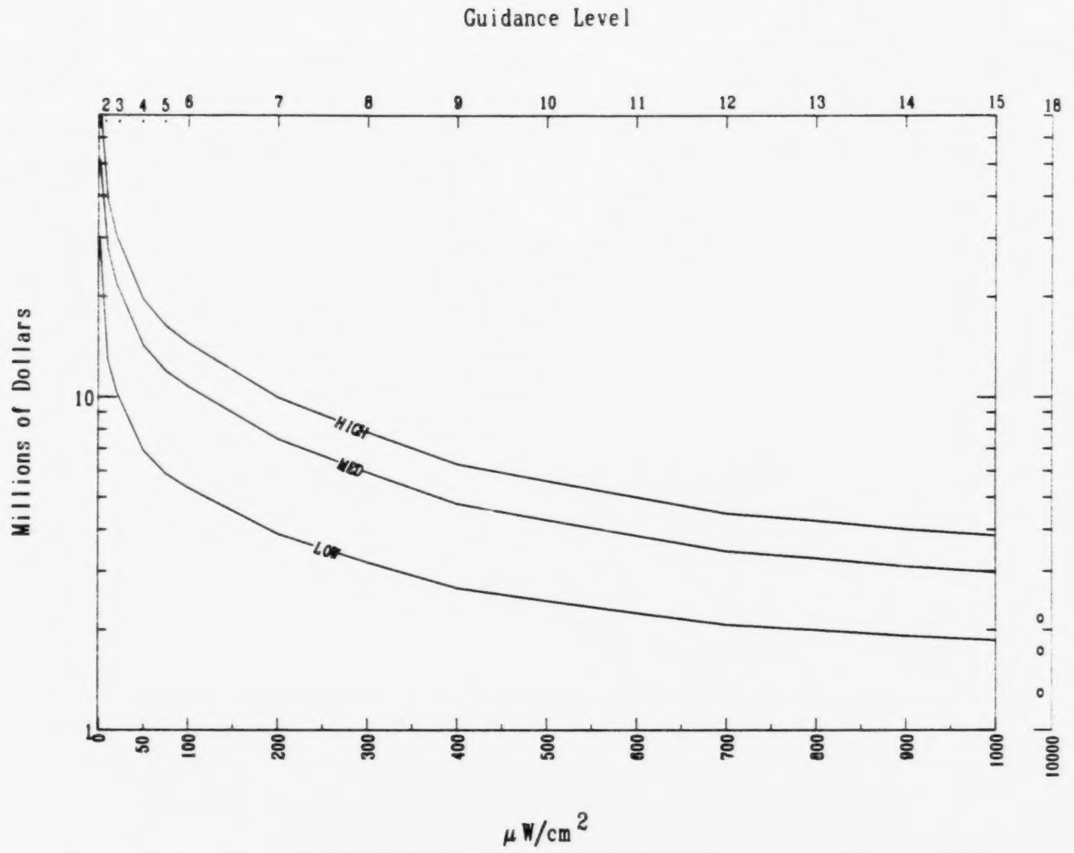

Figure D-1. The annual cash flow (current year dollar) cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from FM radio broadcast sources is shown for 18 specified guidance levels at three cost levels. It is assumed that stations select one of five compliance measures and that compliance costs are spread evenly among five annual cohorts of stations.

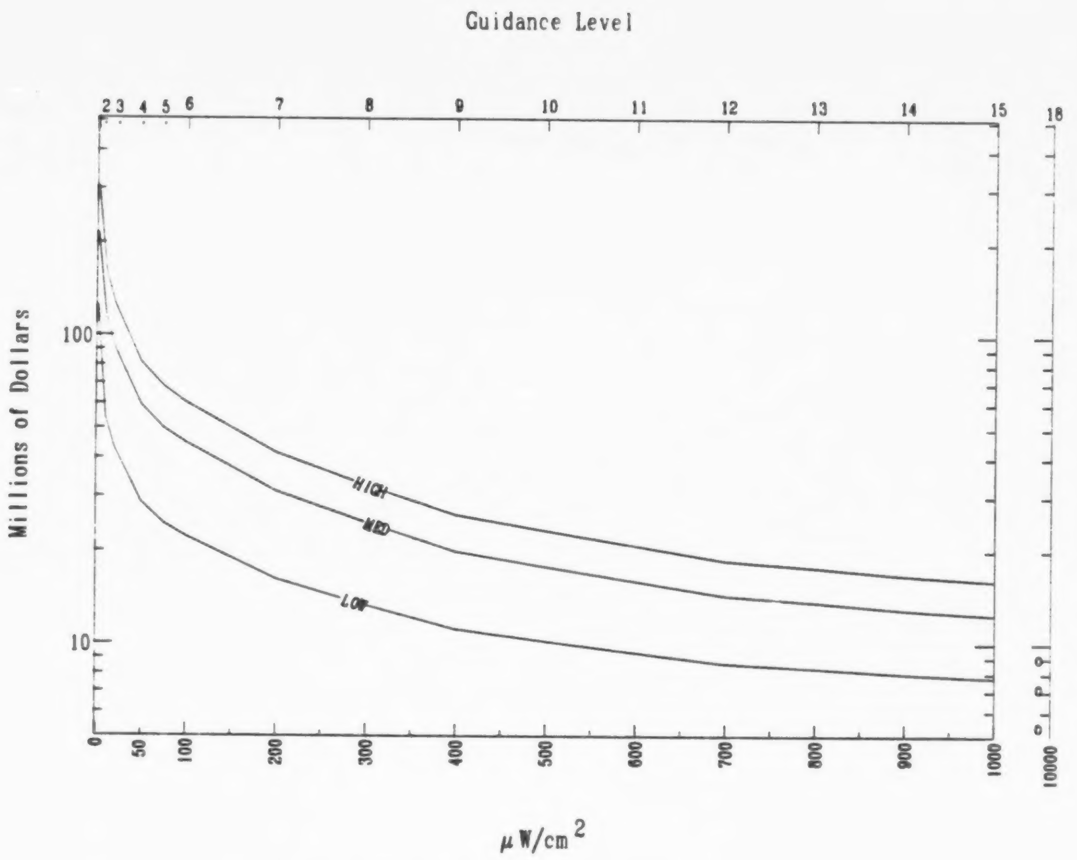

Figure D-2. The present (constant dollar) value of the cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from FM radio broadcast sources is shown for 18 specified guidance levels at three cost levels. It is assumed that stations select one of five compliance measures.

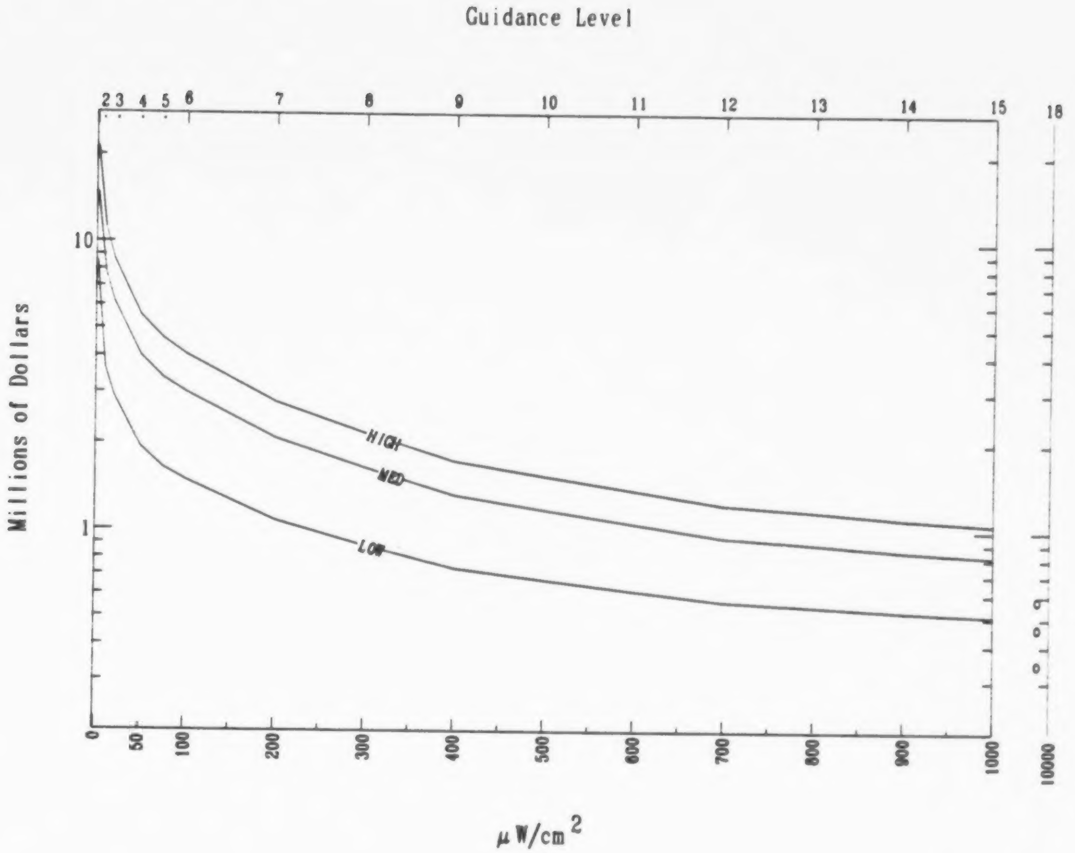

Figure D-3. The average annual net after-tax cash flow (current year dollar) cost to the FM radio broadcast industry of guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at three cost levels. It is assumed that stations select one of five compliance measures.

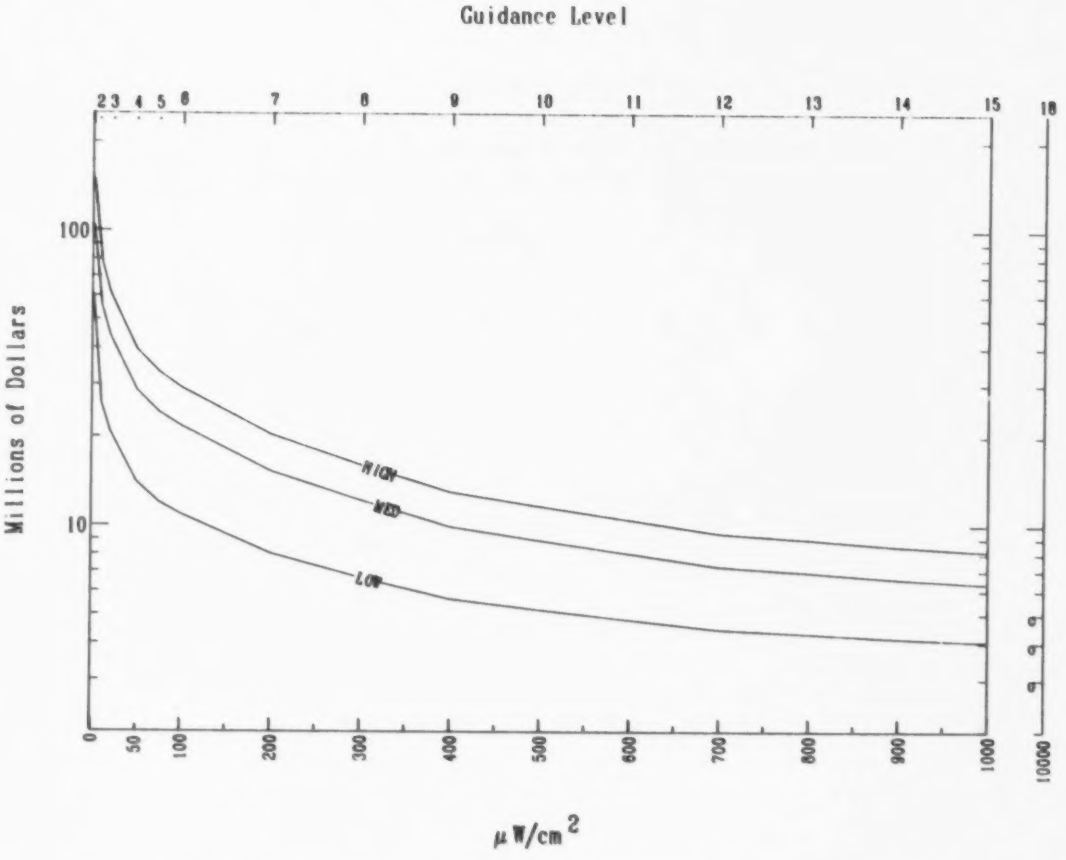

Figure D-4. The present (constant dollar) value of the net after-tax cost to the FM radio broadcast industry of guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at three cost levels. It is assumed that stations select one of five compliance measures.

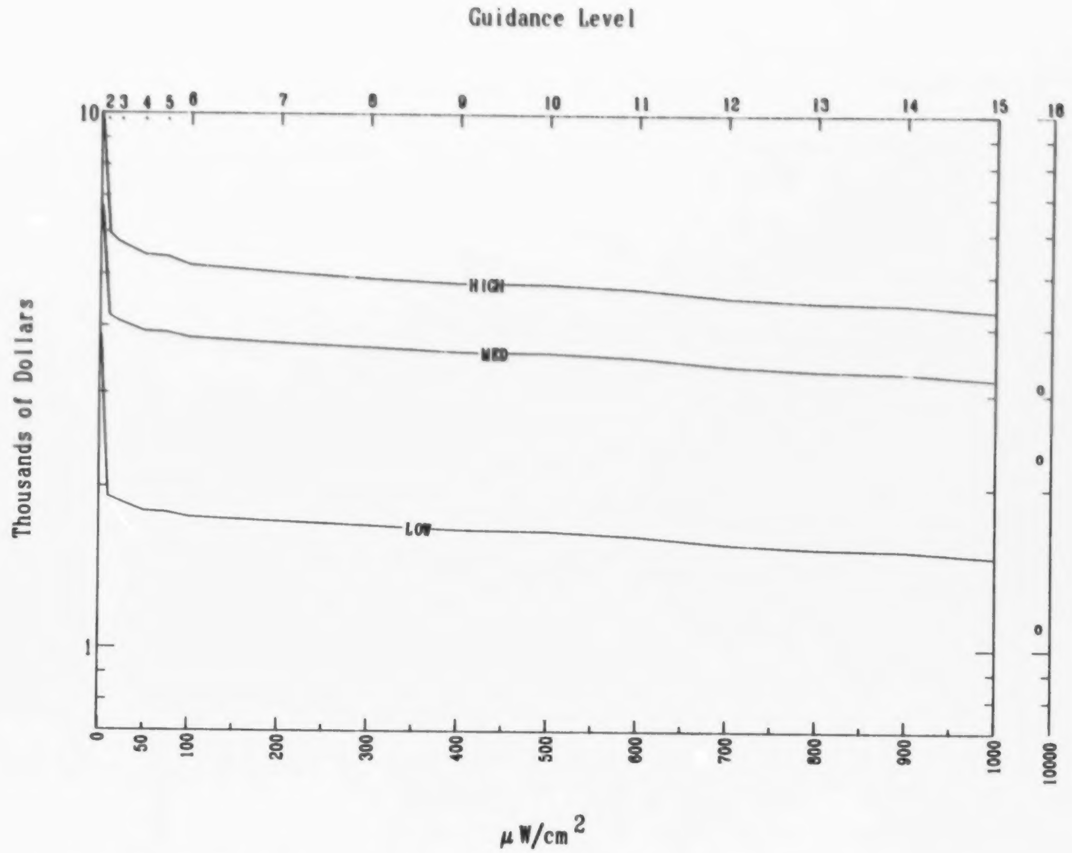

Figure D-5. The average annual net after-tax cash flow (current year dollar) cost of compliance for the average profitable FM radio broadcast station of guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at three cost levels. It is assumed that stations select one of five compliance measures.

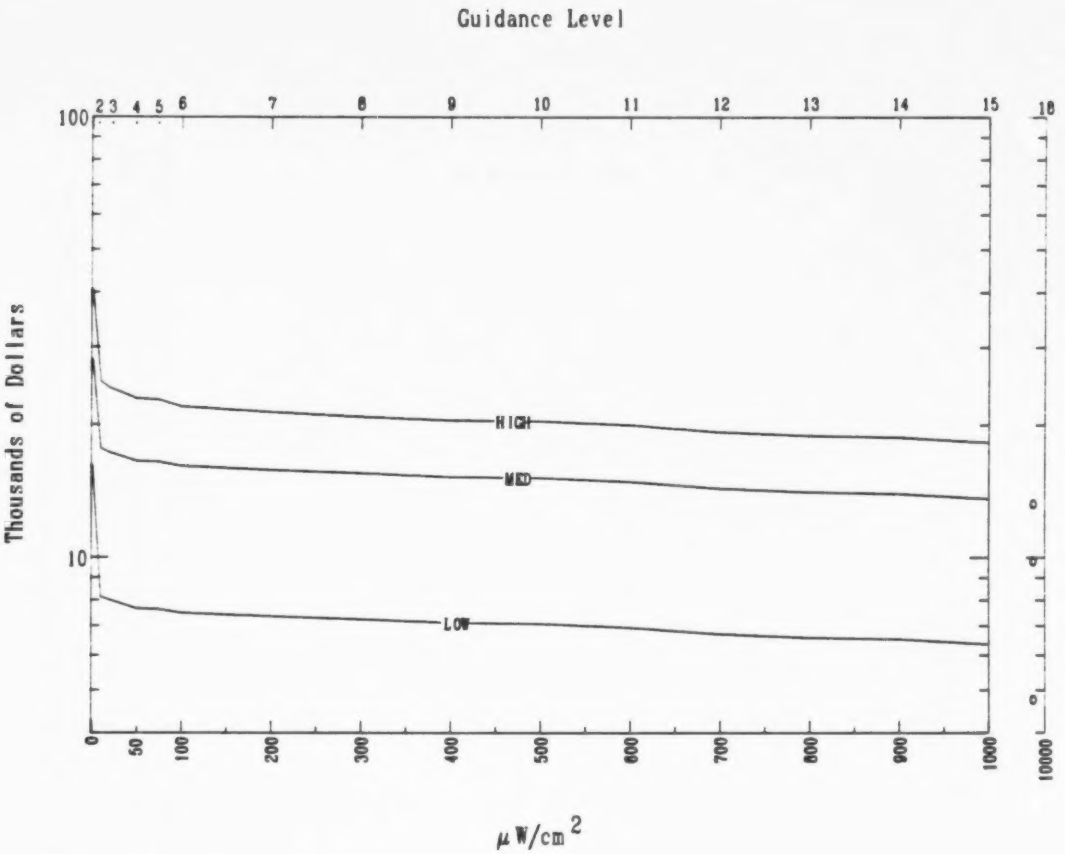

Figure D-6. The average (of 5 cohorts) present (constant dollar) value of the net after-tax cost of compliance for the average profitable FM radio broadcast station of guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at 3 cost levels. It is assumed that stations select one of five compliance measures.

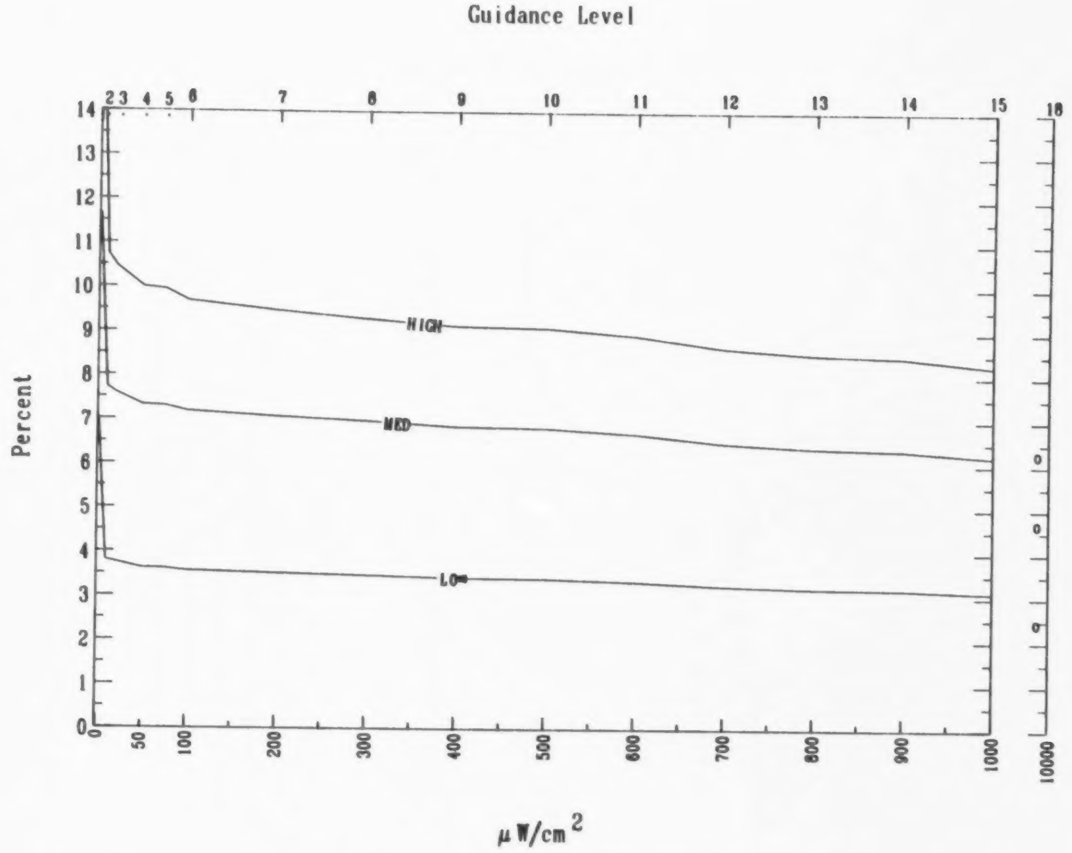

Figure D-7. The percentage reduction in the net profit of the average profitable FM radio broadcast station associated with the maximum annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 18 guidance levels at 3 cost levels. It is assumed that stations select one of five compliance measures.

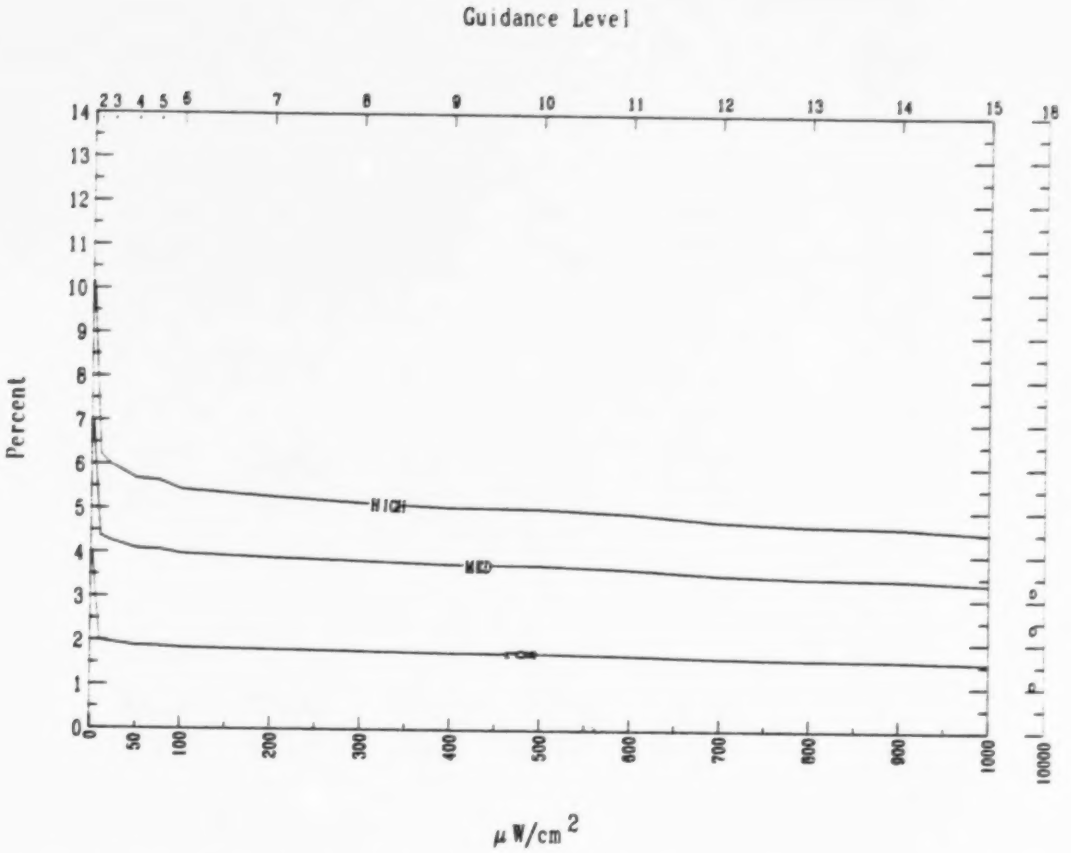

Figure D-8. The percentage reduction in the net profit of the average profitable FM radio broadcast station associated with the average annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 18 guidance levels at 3 cost levels. It is assumed that stations select one of five compliance measures.

TABLE D-1. AN ESTIMATE OF THE POTENTIAL COST TO THE SOCIETY-AT-LARGE OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM FM RADIO BROADCAST SOURCES IS GIVEN FOR 3 COST LEVELS. THE TOTAL GROSS COST, ANNUAL CASH FLOW (CURRENT YEAR DOLLAR) COST AND THE PRESENT (CONSTANT DOLLAR) VALUE ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT STATIONS SELECT ONE OF FIVE COMPLIANCE MEASURES (2 THROUGH 6) AND THAT COMPLIANCE COSTS (ANNUAL CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN MILLIONS OF DOLLARS.

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
1. 1 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	143.45	248.64	355.35
TOTAL GROSS COST	150.01	257.39	366.28
ANNUAL CASH FLOW COST	30.00	51.48	73.26
PRESENT VALUE	125.11	214.65	305.47
2. 10 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	58.54	131.01	186.07
TOTAL GROSS COST	65.10	139.76	197.00
ANNUAL CASH FLOW COST	13.02	27.95	39.40
PRESENT VALUE	54.29	116.55	164.30
3. 20 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	45.23	100.70	141.41
TOTAL GROSS COST	51.79	109.45	152.35
ANNUAL CASH FLOW COST	10.36	21.89	30.47
PRESENT VALUE	43.19	91.28	127.06
4. 50 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	27.99	62.55	86.92
TOTAL GROSS COST	34.55	71.30	97.86
ANNUAL CASH FLOW COST	6.91	14.26	19.57
PRESENT VALUE	28.82	59.46	81.61
5. 75 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	22.84	51.10	70.83
TOTAL GROSS COST	29.40	59.84	81.77
ANNUAL CASH FLOW COST	5.88	11.97	16.35
PRESENT VALUE	24.52	49.91	68.19

TABLE D-1. (CONTINUED)

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
6. 100 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	20.10	44.91	61.46
TOTAL GROSS COST	26.67	53.65	72.40
ANNUAL CASH FLOW COST	5.33	10.73	14.48
PRESENT VALUE	22.24	44.75	60.38
7. 200 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	12.86	28.65	38.95
TOTAL GROSS COST	19.42	37.39	49.88
ANNUAL CASH FLOW COST	3.88	7.48	9.98
PRESENT VALUE	16.19	31.19	41.60
8. 300 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	9.39	20.92	28.22
TOTAL GROSS COST	15.95	29.67	39.16
ANNUAL CASH FLOW COST	3.19	5.93	7.83
PRESENT VALUE	13.30	24.74	32.66
9. 400 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	6.79	15.13	20.43
TOTAL GROSS COST	13.35	23.88	31.36
ANNUAL CASH FLOW COST	2.67	4.78	6.27
PRESENT VALUE	11.14	19.91	26.15
10. 500 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	5.64	12.58	16.98
TOTAL GROSS COST	12.20	21.32	27.91
ANNUAL CASH FLOW COST	2.44	4.26	5.58
PRESENT VALUE	10.18	17.78	23.28

TABLE D-1. (CONTINUED)

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
11. 600 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	4.66	10.40	14.04
TOTAL GROSS COST	11.22	19.15	24.98
ANNUAL CASH FLOW COST	2.24	3.83	5.00
PRESENT VALUE	9.36	15.97	20.83
12. 700 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	3.78	8.45	11.40
TOTAL GROSS COST	10.35	17.20	22.33
ANNUAL CASH FLOW COST	2.07	3.44	4.47
PRESENT VALUE	8.63	14.34	18.63
13. 800 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	3.42	7.64	10.31
TOTAL GROSS COST	9.98	16.39	21.25
ANNUAL CASH FLOW COST	2.00	3.28	4.25
PRESENT VALUE	8.32	13.67	17.72
14. 900 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	3.02	6.75	9.12
TOTAL GROSS COST	9.59	15.50	20.05
ANNUAL CASH FLOW COST	1.92	3.10	4.01
PRESENT VALUE	7.99	12.93	16.72
15. 1000 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	2.74	6.13	8.27
TOTAL GROSS COST	9.30	14.88	19.20
ANNUAL CASH FLOW COST	1.86	2.98	3.84
PRESENT VALUE	7.76	12.41	16.01

TABLE D-1. (CONTINUED)

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
16. 2000 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	1.24	2.76	3.73
TOTAL GROSS COST	7.80	11.51	14.67
ANNUAL CASH FLOW COST	1.56	2.30	2.93
PRESENT VALUE	6.51	9.60	12.23
17. 5000 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	0.28	0.62	0.85
TOTAL GROSS COST	6.84	9.37	11.78
ANNUAL CASH FLOW COST	1.37	1.87	2.36
PRESENT VALUE	5.71	7.82	9.83
18. 10000 MICROWATT PER SQ. CM			
COMPLIANCE SURVEY COST	6.56	8.75	10.94
COMPLIANCE MEASURE COST	0.04	0.08	0.11
TOTAL GROSS COST	6.60	8.83	11.04
ANNUAL CASH FLOW COST	1.32	1.77	2.21
PRESENT VALUE	5.50	7.36	9.21

TABLE D-2. AN ESTIMATE OF THE POTENTIAL COST TO THE FM BROADCAST INDUSTRY OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 3 COST LEVELS. THE ANNUAL, AVERAGE AND TOTAL CASH FLOW (CURRENT YEAR DOLLAR) COST AND THE PRESENT (CONSTANT DOLLAR) VALUE OF THE NET AFTER TAX COST ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT STATIONS SELECT ONE OF FIVE COMPLIANCE MEASURES (2 THROUGH 6) AND THAT COMPLIANCE COSTS (ANNUAL NET CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN MILLIONS OF DOLLARS.

GUIDANCE LEVEL 1. 1 MICROWATT PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	4.987	3.488	2.371	2.274	2.049	1.824					
COHORT 2		4.987	3.488	2.371	2.274	2.049	1.824				
COHORT 3			4.987	3.488	2.371	2.274	2.049	1.824			
COHORT 4				4.987	3.488	2.371	2.274	2.049	1.824		
COHORT 5					4.987	3.488	2.371	2.274	2.049	1.824	
ANNUAL CASH FLOW PROJECTED	4.987	8.475	10.846	13.120	15.169	12.006	8.518	6.147	3.874	1.824	84.967
AVERAGE	8.497										
PRESENT VALUE	59.872										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	8.304	6.051	4.202	4.042	3.670	3.298					
COHORT 2		8.304	6.051	4.202	4.042	3.670	3.298				
COHORT 3			8.304	6.051	4.202	4.042	3.670	3.298			
COHORT 4				8.304	6.051	4.202	4.042	3.670	3.298		
COHORT 5					8.304	6.051	4.202	4.042	3.670	3.298	
ANNUAL CASH FLOW PROJECTED	8.304	14.356	18.558	22.600	26.270	21.264	15.212	11.010	6.968	3.298	147.839
AVERAGE	14.784										
PRESENT VALUE	103.703										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	11.617	8.656	6.141	5.922	5.417	4.911					
COHORT 2		11.617	8.656	6.141	5.922	5.417	4.911				
COHORT 3			11.617	8.656	6.141	5.922	5.417	4.911			
COHORT 4				11.617	8.656	6.141	5.922	5.417	4.911		
COHORT 5					11.617	8.656	6.141	5.922	5.417	4.911	
ANNUAL CASH FLOW PROJECTED	11.617	20.273	26.414	32.336	37.752	31.047	22.390	16.250	10.327	4.911	213.317
AVERAGE	21.332										
PRESENT VALUE	149.111										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 2. 10 MICROWATT PER SQ. CM

LOW COST	0	1	2	3	4	5	6	7	8	9	TOTAL
				TIME PERIOD							
COHORT 1	2.459	1.423	0.961	0.921	0.828	0.735					
COHORT 2		2.459	1.423	0.961	0.921	0.828	0.735				
COHORT 3			2.459	1.423	0.961	0.921	0.828	0.735			
COHORT 4				2.459	1.423	0.961	0.921	0.828	0.735		
COHORT 5					2.459	1.423	0.961	0.921	0.828	0.735	
ANNUAL CASH FLOW											
PROJECTED	2.459	3.882	4.843	5.764	6.592	4.869	3.445	2.484	1.563	0.735	36.636
AVERAGE	3.664										
PRESENT VALUE	26.107										

MEDIUM COST	0	1	2	3	4	5	6	7	8	9	TOTAL
				TIME PERIOD							
COHORT 1	4.850	3.186	2.169	2.081	1.877	1.672					
COHORT 2		4.850	3.186	2.169	2.081	1.877	1.672				
COHORT 3			4.850	3.186	2.169	2.081	1.877	1.672			
COHORT 4				4.850	3.186	2.169	2.081	1.877	1.672		
COHORT 5					4.850	3.186	2.169	2.081	1.877	1.672	
ANNUAL CASH FLOW											
PROJECTED	4.850	8.036	10.205	12.286	14.162	10.985	7.799	5.630	3.549	1.672	79.172
AVERAGE	7.917										
PRESENT VALUE	55.969										

HIGH COST	0	1	2	3	4	5	6	7	8	9	TOTAL
				TIME PERIOD							
COHORT 1	6.706	4.527	3.115	2.993	2.709	2.425					
COHORT 2		6.706	4.527	3.115	2.993	2.709	2.425				
COHORT 3			6.706	4.527	3.115	2.993	2.709	2.425			
COHORT 4				6.706	4.527	3.115	2.993	2.709	2.425		
COHORT 5					6.706	4.527	3.115	2.993	2.709	2.425	
ANNUAL CASH FLOW											
PROJECTED	6.706	11.233	14.348	17.341	20.050	15.769	11.243	8.127	5.134	2.425	112.378
AVERAGE	11.238										
PRESENT VALUE	79.232										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 3. 20 MICROWATT PER SQ. CM

LOW COST	0	1	2	TIME PERIOD 3	4	5	6	7	8	9	TOTAL
COHORT 1	2.062	1.099	0.741	0.710	0.638	0.566					
COHORT 2		2.062	1.099	0.741	0.710	0.638	0.566				
COHORT 3			2.062	1.099	0.741	0.710	0.638	0.566			
COHORT 4				2.062	1.099	0.741	0.710	0.638	0.566		
COHORT 5					2.062	1.099	0.741	0.710	0.638	0.566	
ANNUAL CASH FLOW PROJECTED	2.062	3.161	3.902	4.612	5.250	3.754	2.654	1.913	1.204	0.566	29.077
AVERAGE	2.908										
PRESENT VALUE	20.823										

MEDIUM COST	0	1	2	TIME PERIOD 3	4	5	6	7	8	9	TOTAL
COHORT 1	3.950	2.449	1.661	1.593	1.435	1.276					
COHORT 2		3.950	2.449	1.661	1.593	1.435	1.276				
COHORT 3			3.950	2.449	1.661	1.593	1.435	1.276			
COHORT 4				3.950	2.449	1.661	1.593	1.435	1.276		
COHORT 5					3.950	2.449	1.661	1.593	1.435	1.276	
ANNUAL CASH FLOW PROJECTED	3.950	6.399	8.060	9.653	11.088	8.414	5.965	4.304	2.711	1.276	61.820
AVERAGE	6.182										
PRESENT VALUE	43.860										

HIGH COST	0	1	2	TIME PERIOD 3	4	5	6	7	8	9	TOTAL
COHORT 1	5.388	3.440	2.355	2.261	2.042	1.824					
COHORT 2		5.388	3.440	2.355	2.261	2.042	1.824				
COHORT 3			5.388	3.440	2.355	2.261	2.042	1.824			
COHORT 4				5.388	3.440	2.355	2.261	2.042	1.824		
COHORT 5					5.388	3.440	2.355	2.261	2.042	1.824	
ANNUAL CASH FLOW PROJECTED	5.388	8.828	11.183	13.443	15.486	11.922	8.482	6.127	3.867	1.824	86.550
AVERAGE	8.655										
PRESENT VALUE	61.245										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 4. 50 MICROWATT PER SQ. CM

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.547	0.680	0.458	0.438	0.393	0.349					
COHORT 2		1.547	0.680	0.458	0.438	0.393	0.349				
COHORT 3			1.547	0.680	0.458	0.438	0.393	0.349			
COHORT 4				1.547	0.680	0.458	0.438	0.393	0.349		
COHORT 5					1.547	0.680	0.458	0.438	0.393	0.349	
ANNUAL CASH FLOW PROJECTED	1.547	2.227	2.684	3.123	3.516	2.318	1.638	1.180	0.742	0.349	19.323
AVERAGE	1.932										
PRESENT VALUE	14.000										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	2.814	1.521	1.027	0.985	0.886	0.786					
COHORT 2		2.814	1.521	1.027	0.985	0.886	0.786				
COHORT 3			2.814	1.521	1.027	0.985	0.886	0.786			
COHORT 4				2.814	1.521	1.027	0.985	0.886	0.786		
COHORT 5					2.814	1.521	1.027	0.985	0.886	0.786	
ANNUAL CASH FLOW PROJECTED	2.814	4.335	5.362	6.347	7.232	5.205	3.684	2.657	1.672	0.786	40.094
AVERAGE	4.009										
PRESENT VALUE	28.683										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	3.773	2.114	1.438	1.379	1.243	1.108					
COHORT 2		3.773	2.114	1.438	1.379	1.243	1.108				
COHORT 3			3.773	2.114	1.438	1.379	1.243	1.108			
COHORT 4				3.773	2.114	1.438	1.379	1.243	1.108		
COHORT 5					3.773	2.114	1.438	1.379	1.243	1.108	
ANNUAL CASH FLOW PROJECTED	3.773	5.886	7.324	8.704	9.947	7.282	5.168	3.730	2.351	1.108	55.274
AVERAGE	5.527										
PRESENT VALUE	39.430										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 5. 75 MICROWATT PER SQ. CM

LOW COST

	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.392	0.555	0.373	0.357	0.321	0.284					
COHORT 2		1.392	0.555	0.373	0.357	0.321	0.284				
COHORT 3			1.392	0.555	0.373	0.357	0.321	0.284			
COHORT 4				1.392	0.555	0.373	0.357	0.321	0.284		
COHORT 5					1.392	0.555	0.373	0.357	0.321	0.284	
ANNUAL CASH FLOW PROJECTED	1.392	1.948	2.321	2.678	2.999	1.890	1.335	0.962	0.605	0.284	16.413
AVERAGE	1.641										
PRESENT VALUE	11.964										

MEDIUM COST

	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	2.472	1.242	0.839	0.803	0.722	0.641					
COHORT 2		2.472	1.242	0.839	0.803	0.722	0.641				
COHORT 3			2.472	1.242	0.839	0.803	0.722	0.641			
COHORT 4				2.472	1.242	0.839	0.803	0.722	0.641		
COHORT 5					2.472	1.242	0.839	0.803	0.722	0.641	
ANNUAL CASH FLOW PROJECTED	2.472	3.714	4.553	5.356	6.079	4.248	3.005	2.167	1.364	0.641	33.600
AVERAGE	3.360										
PRESENT VALUE	24.142										

HIGH COST

	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	3.294	1.722	1.170	1.122	1.011	0.900					
COHORT 2		3.294	1.722	1.170	1.122	1.011	0.900				
COHORT 3			3.294	1.722	1.170	1.122	1.011	0.900			
COHORT 4				3.294	1.722	1.170	1.122	1.011	0.900		
COHORT 5					3.294	1.722	1.170	1.122	1.011	0.900	
ANNUAL CASH FLOW PROJECTED	3.294	5.016	6.186	7.308	8.319	5.925	4.203	3.033	1.911	0.900	46.094
AVERAGE	4.609										
PRESENT VALUE	33.020										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 6. 100 MICROWATT PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.311	0.489	0.327	0.314	0.281	0.249					
COHORT 2		1.311	0.489	0.327	0.314	0.281	0.249				
COHORT 3			1.311	0.489	0.327	0.314	0.281	0.249			
COHORT 4				1.311	0.489	0.327	0.314	0.281	0.249		
COHORT 5					1.311	0.489	0.327	0.314	0.281	0.249	
ANNUAL CASH FLOW											
PROJECTED	1.311	1.800	2.127	2.441	2.722	1.659	1.171	0.843	0.530	0.249	14.853
AVERAGE	1.485										
PRESENT VALUE	10.875										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	2.290	1.091	0.733	0.702	0.630	0.558					
COHORT 2		2.290	1.091	0.733	0.702	0.630	0.558				
COHORT 3			2.290	1.091	0.733	0.702	0.630	0.558			
COHORT 4				2.290	1.091	0.733	0.702	0.630	0.558		
COHORT 5					2.290	1.091	0.733	0.702	0.630	0.558	
ANNUAL CASH FLOW											
PROJECTED	2.290	3.381	4.114	4.816	5.447	3.715	2.624	1.891	1.188	0.558	30.024
AVERAGE	3.002										
PRESENT VALUE	21.651										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	3.019	1.494	1.007	0.965	0.867	0.769					
COHORT 2		3.019	1.494	1.007	0.965	0.867	0.769				
COHORT 3			3.019	1.494	1.007	0.965	0.867	0.769			
COHORT 4				3.019	1.494	1.007	0.965	0.867	0.769		
COHORT 5					3.019	1.494	1.007	0.965	0.867	0.769	
ANNUAL CASH FLOW											
PROJECTED	3.019	4.513	5.521	6.486	7.353	5.102	3.608	2.601	1.636	0.769	40.608
AVERAGE	4.061										
PRESENT VALUE	29.209										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 7. 200 MICROWATT PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.094	0.312	0.209	0.200	0.179	0.159					
COHORT 2		1.094	0.312	0.209	0.200	0.179	0.159				
COHORT 3			1.094	0.312	0.209	0.200	0.179	0.159			
COHORT 4				1.094	0.312	0.209	0.200	0.179	0.159		
COHORT 5					1.094	0.312	0.209	0.200	0.179	0.159	
ANNUAL CASH FLOW											
PROJECTED	1.094	1.407	1.616	1.816	1.995	1.060	0.747	0.538	0.338	0.159	10.769
AVERAGE	1.077										
PRESENT VALUE	8.016										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.803	0.696	0.467	0.447	0.400	0.354					
COHORT 2		1.803	0.696	0.467	0.447	0.400	0.354				
COHORT 3			1.803	0.696	0.467	0.447	0.400	0.354			
COHORT 4				1.803	0.696	0.467	0.447	0.400	0.354		
COHORT 5					1.803	0.696	0.467	0.447	0.400	0.354	
ANNUAL CASH FLOW											
PROJECTED	1.803	2.500	2.966	3.413	3.813	2.364	1.668	1.201	0.755	0.354	20.836
AVERAGE	2.084										
PRESENT VALUE	15.223										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	2.348	0.947	0.635	0.608	0.546	0.483					
COHORT 2		2.348	0.947	0.635	0.608	0.546	0.483				
COHORT 3			2.348	0.947	0.635	0.608	0.546	0.483			
COHORT 4				2.348	0.947	0.635	0.608	0.546	0.483		
COHORT 5					2.348	0.947	0.635	0.608	0.546	0.483	
ANNUAL CASH FLOW											
PROJECTED	2.348	3.294	3.930	4.538	5.084	3.220	2.273	1.638	1.029	0.483	27.836
AVERAGE	2.784										
PRESENT VALUE	20.280										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 8. 300 MICROWATT PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.990	0.228	0.152	0.146	0.131	0.115					
COHORT 2		0.990	0.228	0.152	0.146	0.131	0.115				
COHORT 3			0.990	0.228	0.152	0.146	0.131	0.115			
COHORT 4				0.990	0.228	0.152	0.146	0.131	0.115		
COHORT 5					0.990	0.228	0.152	0.146	0.131	0.115	
ANNUAL CASH FLOW PROJECTED	0.990	1.218	1.371	1.517	1.647	0.772	0.544	0.392	0.246	0.115	8.813
AVERAGE	0.881										
PRESENT VALUE	6.647										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.572	0.508	0.340	0.325	0.291	0.257					
COHORT 2		1.572	0.508	0.340	0.325	0.291	0.257				
COHORT 3			1.572	0.508	0.340	0.325	0.291	0.257			
COHORT 4				1.572	0.508	0.340	0.325	0.291	0.257		
COHORT 5					1.572	0.508	0.340	0.325	0.291	0.257	
ANNUAL CASH FLOW PROJECTED	1.572	2.081	2.420	2.745	3.037	1.721	1.213	0.873	0.548	0.257	16.469
AVERAGE	1.647										
PRESENT VALUE	12.168										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	2.028	0.686	0.458	0.439	0.393	0.347					
COHORT 2		2.028	0.686	0.458	0.439	0.393	0.347				
COHORT 3			2.028	0.686	0.458	0.439	0.393	0.347			
COHORT 4				2.028	0.686	0.458	0.439	0.393	0.347		
COHORT 5					2.028	0.686	0.458	0.439	0.393	0.347	
ANNUAL CASH FLOW PROJECTED	2.028	2.713	3.172	3.610	4.003	2.323	1.637	1.179	0.740	0.347	21.751
AVERAGE	2.175										
PRESENT VALUE	16.026										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 9. 400 MICROWATT PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.912	0.165	0.110	0.106	0.095	0.084					
COHORT 2		0.912	0.165	0.110	0.106	0.095	0.084				
COHORT 3			0.912	0.165	0.110	0.106	0.095	0.084			
COHORT 4				0.912	0.165	0.110	0.106	0.095	0.084		
COHORT 5					0.912	0.165	0.110	0.106	0.095	0.084	
ANNUAL CASH FLOW PROJECTED	0.912	1.077	1.188	1.293	1.388	0.559	0.394	0.284	0.178	0.084	7.357
AVERAGE	0.736										
PRESENT VALUE	5.626										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.399	0.368	0.246	0.235	0.211	0.186					
COHORT 2		1.399	0.368	0.246	0.235	0.211	0.186				
COHORT 3			1.399	0.368	0.246	0.235	0.211	0.186			
COHORT 4				1.399	0.368	0.246	0.235	0.211	0.186		
COHORT 5					1.399	0.368	0.246	0.235	0.211	0.186	
ANNUAL CASH FLOW PROJECTED	1.399	1.766	2.012	2.247	2.458	1.245	0.877	0.632	0.397	0.186	13.219
AVERAGE	1.322										
PRESENT VALUE	9.891										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.794	0.496	0.332	0.317	0.284	0.251					
COHORT 2		1.794	0.496	0.332	0.317	0.284	0.251				
COHORT 3			1.794	0.496	0.332	0.317	0.284	0.251			
COHORT 4				1.794	0.496	0.332	0.317	0.284	0.251		
COHORT 5					1.794	0.496	0.332	0.317	0.284	0.251	
ANNUAL CASH FLOW PROJECTED	1.794	2.290	2.622	2.939	3.224	1.681	1.185	0.853	0.536	0.251	17.374
AVERAGE	1.737										
PRESENT VALUE	12.959										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 10. 500 MICROWATT PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.878	0.137	0.092	0.088	0.079	0.069					
COHORT 2		0.878	0.137	0.092	0.088	0.079	0.069				
COHORT 3			0.878	0.137	0.092	0.088	0.079	0.069			
COHORT 4				0.878	0.137	0.092	0.088	0.079	0.069		
COHORT 5					0.878	0.137	0.092	0.088	0.079	0.069	
ANNUAL CASH FLOW											
PROJECTED	0.878	1.015	1.107	1.194	1.273	0.464	0.327	0.236	0.148	0.069	6.712
AVERAGE	0.671										
PRESENT VALUE	5.174										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.322	0.306	0.204	0.195	0.175	0.155					
COHORT 2		1.322	0.306	0.204	0.195	0.175	0.155				
COHORT 3			1.322	0.306	0.204	0.195	0.175	0.155			
COHORT 4				1.322	0.306	0.204	0.195	0.175	0.155		
COHORT 5					1.322	0.306	0.204	0.195	0.175	0.155	
ANNUAL CASH FLOW											
PROJECTED	1.322	1.628	1.832	2.027	2.202	1.035	0.729	0.525	0.330	0.155	11.785
AVERAGE	1.179										
PRESENT VALUE	8.886										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.690	0.413	0.276	0.264	0.236	0.209					
COHORT 2		1.690	0.413	0.276	0.264	0.236	0.209				
COHORT 3			1.690	0.413	0.276	0.264	0.236	0.209			
COHORT 4				1.690	0.413	0.276	0.264	0.236	0.209		
COHORT 5					1.690	0.413	0.276	0.264	0.236	0.209	
ANNUAL CASH FLOW											
PROJECTED	1.690	2.103	2.379	2.642	2.879	1.397	0.985	0.709	0.445	0.209	15.438
AVERAGE	1.544										
PRESENT VALUE	11.603										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 11. 600 MICROWATT PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.848	0.113	0.076	0.072	0.065	0.057					
COHORT 2		0.848	0.113	0.076	0.072	0.065	0.057				
COHORT 3			0.848	0.113	0.076	0.072	0.065	0.057			
COHORT 4				0.848	0.113	0.076	0.072	0.065	0.057		
COHORT 5					0.848	0.113	0.076	0.072	0.065	0.057	
ANNUAL CASH FLOW											
PROJECTED	0.848	0.962	1.037	1.110	1.175	0.384	0.270	0.195	0.122	0.057	6.161
AVERAGE	0.616										
PRESENT VALUE	4.788										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.257	0.253	0.169	0.162	0.145	0.128					
COHORT 2		1.257	0.253	0.169	0.162	0.145	0.128				
COHORT 3			1.257	0.253	0.169	0.162	0.145	0.128			
COHORT 4				1.257	0.253	0.169	0.162	0.145	0.128		
COHORT 5					1.257	0.253	0.169	0.162	0.145	0.128	
ANNUAL CASH FLOW											
PROJECTED	1.257	1.510	1.679	1.840	1.985	0.856	0.603	0.434	0.273	0.128	10.566
AVERAGE	1.057										
PRESENT VALUE	8.032										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.602	0.341	0.228	0.218	0.195	0.173					
COHORT 2		1.602	0.341	0.228	0.218	0.195	0.173				
COHORT 3			1.602	0.341	0.228	0.218	0.195	0.173			
COHORT 4				1.602	0.341	0.228	0.218	0.195	0.173		
COHORT 5					1.602	0.341	0.228	0.218	0.195	0.173	
ANNUAL CASH FLOW											
PROJECTED	1.602	1.944	2.172	2.390	2.585	1.156	0.814	0.586	0.368	0.173	13.790
AVERAGE	1.379										
PRESENT VALUE	10.448										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 12. 700 MICROWATT PER SQ. CM

LOW COST	0	1	2	TIME PERIOD 3	4	5	6	7	8	9	TOTAL
COHORT 1	0.822	0.092	0.061	0.059	0.053	0.047					
COHORT 2		0.822	0.092	0.061	0.059	0.053	0.047				
COHORT 3			0.822	0.092	0.061	0.059	0.053	0.047			
COHORT 4				0.822	0.092	0.061	0.059	0.053	0.047		
COHORT 5					0.822	0.092	0.061	0.059	0.053	0.047	
ANNUAL CASH FLOW PROJECTED	0.822	0.914	0.976	1.034	1.087	0.311	0.219	0.158	0.099	0.047	5.668
AVERAGE	0.567										
PRESENT VALUE	4.443										
MEDIUM COST	**0**	**1**	**2**	**TIME PERIOD 3**	**4**	**5**	**6**	**7**	**8**	**9**	**TOTAL**
COHORT 1	1.198	0.205	0.137	0.131	0.118	0.104					
COHORT 2		1.198	0.205	0.137	0.131	0.118	0.104				
COHORT 3			1.198	0.205	0.137	0.131	0.118	0.104			
COHORT 4				1.198	0.205	0.137	0.131	0.118	0.104		
COHORT 5					1.198	0.205	0.137	0.131	0.118	0.104	
ANNUAL CASH FLOW PROJECTED	1.198	1.403	1.541	1.672	1.789	0.695	0.490	0.353	0.221	0.104	9.467
AVERAGE	0.947										
PRESENT VALUE	7.262										
HIGH COST	**0**	**1**	**2**	**TIME PERIOD 3**	**4**	**5**	**6**	**7**	**8**	**9**	**TOTAL**
COHORT 1	1.523	0.277	0.185	0.177	0.159	0.140					
COHORT 2		1.523	0.277	0.185	0.177	0.159	0.140				
COHORT 3			1.523	0.277	0.185	0.177	0.159	0.140			
COHORT 4				1.523	0.277	0.185	0.177	0.159	0.140		
COHORT 5					1.523	0.277	0.185	0.177	0.159	0.140	
ANNUAL CASH FLOW PROJECTED	1.523	1.800	1.985	2.162	2.321	0.938	0.661	0.476	0.299	0.140	12.305
AVERAGE	1.231										
PRESENT VALUE	9.408										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 13. 800 MICROWATT PER SQ. CM

LOW COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.811	0.083	0.056	0.053	0.048	0.042					
COHORT 2		0.811	0.083	0.056	0.053	0.048	0.042				
COHORT 3			0.811	0.083	0.056	0.053	0.048	0.042			
COHORT 4				0.811	0.083	0.056	0.053	0.048	0.042		
COHORT 5					0.811	0.083	0.056	0.053	0.048	0.042	
ANNUAL CASH FLOW											
PROJECTED	0.811	0.894	0.950	1.003	1.051	0.281	0.198	0.143	0.090	0.042	5.463
AVERAGE	0.546										
PRESENT VALUE	4.300										

MEDIUM COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.174	0.186	0.124	0.119	0.106	0.094					
COHORT 2		1.174	0.186	0.124	0.119	0.106	0.094				
COHORT 3			1.174	0.186	0.124	0.119	0.106	0.094			
COHORT 4				1.174	0.186	0.124	0.119	0.106	0.094		
COHORT 5					1.174	0.186	0.124	0.119	0.106	0.094	
ANNUAL CASH FLOW											
PROJECTED	1.174	1.360	1.484	1.603	1.709	0.629	0.443	0.319	0.200	0.094	9.015
AVERAGE	0.901										
PRESENT VALUE	6.946										

HIGH COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.490	0.251	0.167	0.160	0.144	0.127					
COHORT 2		1.490	0.251	0.167	0.160	0.144	0.127				
COHORT 3			1.490	0.251	0.167	0.160	0.144	0.127			
COHORT 4				1.490	0.251	0.167	0.160	0.144	0.127		
COHORT 5					1.490	0.251	0.167	0.160	0.144	0.127	
ANNUAL CASH FLOW											
PROJECTED	1.490	1.741	1.909	2.069	2.212	0.849	0.598	0.431	0.270	0.127	11.696
AVERAGE	1.170										
PRESENT VALUE	8.981										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 14. 900 MICROWATT PER SQ. CM

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.799	0.073	0.049	0.047	0.042	0.037					
COHORT 2		0.799	0.073	0.049	0.047	0.042	0.037				
COHORT 3			0.799	0.073	0.049	0.047	0.042	0.037			
COHORT 4				0.799	0.073	0.049	0.047	0.042	0.037		
COHORT 5					0.799	0.073	0.049	0.047	0.042	0.037	
ANNUAL CASH FLOW											
PROJECTED	0.799	0.873	0.922	0.969	1.011	0.249	0.175	0.126	0.079	0.037	5.241
AVERAGE	0.524										
PRESENT VALUE	4.145										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.147	0.164	0.110	0.105	0.094	0.083					
COHORT 2		1.147	0.164	0.110	0.105	0.094	0.083				
COHORT 3			1.147	0.164	0.110	0.105	0.094	0.083			
COHORT 4				1.147	0.164	0.110	0.105	0.094	0.083		
COHORT 5					1.147	0.164	0.110	0.105	0.094	0.083	
ANNUAL CASH FLOW											
PROJECTED	1.147	1.312	1.421	1.526	1.620	0.556	0.392	0.282	0.177	0.083	8.516
AVERAGE	0.852										
PRESENT VALUE	6.596										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.454	0.222	0.148	0.142	0.127	0.112					
COHORT 2		1.454	0.222	0.148	0.142	0.127	0.112				
COHORT 3			1.454	0.222	0.148	0.142	0.127	0.112			
COHORT 4				1.454	0.222	0.148	0.142	0.127	0.112		
COHORT 5					1.454	0.222	0.148	0.142	0.127	0.112	
ANNUAL CASH FLOW											
PROJECTED	1.454	1.676	1.824	1.966	2.093	0.750	0.529	0.381	0.239	0.112	11.024
AVERAGE	1.102										
PRESENT VALUE	8.511										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 15. 1000 MICROWATT PER SQ. CM

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.791	0.067	0.045	0.043	0.038	0.034					
COHORT 2		0.791	0.067	0.045	0.043	0.038	0.034				
COHORT 3			0.791	0.067	0.045	0.043	0.038	0.034			
COHORT 4				0.791	0.067	0.045	0.043	0.038	0.034		
COHORT 5					0.791	0.067	0.045	0.043	0.038	0.034	
ANNUAL CASH FLOW											
PROJECTED	0.791	0.858	0.902	0.945	0.983	0.226	0.159	0.115	0.072	0.034	5.083
AVERAGE	0.508										
PRESENT VALUE	4.034										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.129	0.149	0.100	0.095	0.085	0.075					
COHORT 2		1.129	0.149	0.100	0.095	0.085	0.075				
COHORT 3			1.129	0.149	0.100	0.095	0.085	0.075			
COHORT 4				1.129	0.149	0.100	0.095	0.085	0.075		
COHORT 5					1.129	0.149	0.100	0.095	0.085	0.075	
ANNUAL CASH FLOW											
PROJECTED	1.129	1.278	1.377	1.473	1.558	0.505	0.356	0.256	0.161	0.075	8.166
AVERAGE	0.817										
PRESENT VALUE	6.351										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.429	0.201	0.134	0.128	0.115	0.102					
COHORT 2		1.429	0.201	0.134	0.128	0.115	0.102				
COHORT 3			1.429	0.201	0.134	0.128	0.115	0.102			
COHORT 4				1.429	0.201	0.134	0.128	0.115	0.102		
COHORT 5					1.429	0.201	0.134	0.128	0.115	0.102	
ANNUAL CASH FLOW											
PROJECTED	1.429	1.630	1.764	1.893	2.008	0.680	0.480	0.345	0.217	0.102	10.547
AVERAGE	1.055										
PRESENT VALUE	8.177										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 16. 2000 MICROWATT PER SQ. CM

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.746	0.030	0.020	0.019	0.017	0.015					
COHORT 2		0.746	0.030	0.020	0.019	0.017	0.015				
COHORT 3			0.746	0.030	0.020	0.019	0.017	0.015			
COHORT 4				0.746	0.030	0.020	0.019	0.017	0.015		
COHORT 5					0.746	0.030	0.020	0.019	0.017	0.015	
ANNUAL CASH FLOW											
PROJECTED	0.746	0.776	0.796	0.815	0.833	0.102	0.072	0.052	0.033	0.015	4.239
AVERAGE	0.424										
PRESENT VALUE	3.442										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.028	0.067	0.045	0.043	0.038	0.034					
COHORT 2		1.028	0.067	0.045	0.043	0.038	0.034				
COHORT 3			1.028	0.067	0.045	0.043	0.038	0.034			
COHORT 4				1.028	0.067	0.045	0.043	0.038	0.034		
COHORT 5					1.028	0.067	0.045	0.043	0.038	0.034	
ANNUAL CASH FLOW											
PROJECTED	1.028	1.095	1.140	1.183	1.221	0.228	0.160	0.115	0.072	0.034	6.276
AVERAGE	0.628										
PRESENT VALUE	5.027										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.293	0.091	0.061	0.058	0.052	0.046					
COHORT 2		1.293	0.091	0.061	0.058	0.052	0.046				
COHORT 3			1.293	0.091	0.061	0.058	0.052	0.046			
COHORT 4				1.293	0.091	0.061	0.058	0.052	0.046		
COHORT 5					1.293	0.091	0.061	0.058	0.052	0.046	
ANNUAL CASH FLOW											
PROJECTED	1.293	1.384	1.444	1.502	1.554	0.307	0.216	0.156	0.098	0.046	8.001
AVERAGE	0.800										
PRESENT VALUE	6.393										

TABLE D-2. (CONTINUED)

GUIDANCE LEVEL 17. 5000 MICROWATT PER SQ. CM

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.717	0.007	0.005	0.004	0.004	0.003					
COHORT 2		0.717	0.007	0.005	0.004	0.004	0.003				
COHORT 3			0.717	0.007	0.005	0.004	0.004	0.003			
COHORT 4				0.717	0.007	0.005	0.004	0.004	0.003		
COHORT 5					0.717	0.007	0.005	0.004	0.004	0.003	
ANNUAL CASH FLOW											
PROJECTED	0.717	0.724	0.728	0.733	0.737	0.023	0.016	0.012	0.007	0.003	3.701
AVERAGE	0.370										
PRESENT VALUE	3.066										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.964	0.015	0.010	0.010	0.009	0.008					
COHORT 2		0.964	0.015	0.010	0.010	0.009	0.008				
COHORT 3			0.964	0.015	0.010	0.010	0.009	0.008			
COHORT 4				0.964	0.015	0.010	0.010	0.009	0.008		
COHORT 5					0.964	0.015	0.010	0.010	0.009	0.008	
ANNUAL CASH FLOW											
PROJECTED	0.964	0.979	0.989	0.999	1.007	0.051	0.036	0.026	0.016	0.008	5.075
AVERAGE	0.507										
PRESENT VALUE	4.186										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.206	0.021	0.014	0.013	0.012	0.010					
COHORT 2		1.206	0.021	0.014	0.013	0.012	0.010				
COHORT 3			1.206	0.021	0.014	0.013	0.012	0.010			
COHORT 4				1.206	0.021	0.014	0.013	0.012	0.010		
COHORT 5					1.206	0.021	0.014	0.013	0.012	0.010	
ANNUAL CASH FLOW											
PROJECTED	1.206	1.227	1.241	1.254	1.266	0.070	0.049	0.035	0.022	0.010	6.380
AVERAGE	0.638										
PRESENT VALUE	5.257										

TABLE D-2. (CONTINUED)

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GUIDANCE LEVEL    18.  10000 MICROWATT PER SQ. CM

      LOW COST                                         TIME PERIOD
                     0         1         2         3         4         5         6         7         8         9          TOTAL
                 --------  --------  --------  --------  --------  --------  --------  --------  --------  --------   --------
  COHORT 1        0.710     0.001     0.001     0.001     0.000     0.000
  COHORT 2                  0.710     0.001     0.001     0.001     0.000     0.000
  COHORT 3                            0.710     0.001     0.001     0.001     0.000     0.000
  COHORT 4                                      0.710     0.001     0.001     0.001     0.000     0.000
  COHORT 5                                                0.710     0.001     0.001     0.001     0.000     0.000
                 --------  --------  --------  --------  --------  --------  --------  --------  --------  --------   --------
ANNUAL CASH FLOW
   PROJECTED      0.710     0.711     0.711     0.712     0.712     0.003     0.002     0.001     0.001     0.000      3.563
   AVERAGE        0.356
PRESENT VALUE     2.969
     MEDIUM COST                                       TIME PERIOD
                     0         1         2         3         4         5         6         7         8         9          TOTAL
                 --------  --------  --------  --------  --------  --------  --------  --------  --------  --------   --------
  COHORT 1        0.947     0.002     0.001     0.001     0.001     0.001
  COHORT 2                  0.947     0.002     0.001     0.001     0.001     0.001
  COHORT 3                            0.947     0.002     0.001     0.001     0.001     0.001
  COHORT 4                                      0.947     0.002     0.001     0.001     0.001     0.001
  COHORT 5                                                0.947     0.002     0.001     0.001     0.001     0.001
                 --------  --------  --------  --------  --------  --------  --------  --------  --------  --------   --------
ANNUAL CASH FLOW
   PROJECTED      0.947     0.949     0.950     0.951     0.953     0.006     0.005     0.003     0.002     0.001      4.768
   AVERAGE        0.477
PRESENT VALUE     3.970
      HIGH COST                                        TIME PERIOD
                     0         1         2         3         4         5         6         7         8         9          TOTAL
                 --------  --------  --------  --------  --------  --------  --------  --------  --------  --------   --------
  COHORT 1        1.184     0.003     0.002     0.002     0.001     0.001
  COHORT 2                  1.184     0.003     0.002     0.002     0.001     0.001
  COHORT 3                            1.184     0.003     0.002     0.002     0.001     0.001
  COHORT 4                                      1.184     0.003     0.002     0.002     0.001     0.001
  COHORT 5                                                1.184     0.003     0.002     0.002     0.001     0.001
                 --------  --------  --------  --------  --------  --------  --------  --------  --------  --------   --------
ANNUAL CASH FLOW
   PROJECTED      1.184     1.187     1.188     1.190     1.192     0.009     0.006     0.004     0.003     0.001      5.964
   AVERAGE        0.596
PRESENT VALUE     4.966
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TABLE D-3. AN ESTIMATE OF THE EFFECTS ON THE AVERAGE PROFITABLE FM BROADCAST STATION OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 3 COST LEVELS. RESULTS ARE SHOWN FOR THE AVERAGE COST OF COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT THE STATION SELECTS ONE OF FIVE COMPLIANCE MEASURES (2 THROUGH 6). NUMBERS ARE IN THOUSANDS OF DOLLARS.

GUIDANCE LEVEL 1. 1 MICROWATT PER SQ. CM LOW COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	11.281	8.833	8.264	7.696	7.127	6.558	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	128.119	130.567	131.136	131.704	132.273	132.842	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.688	5.688	5.688	5.688	5.688	
(-) DEPRECIATION	0.	0.	5.688	8.342	7.963	7.963	7.963	
TAXABLE INCOME	139.400	137.598	130.567	128.481	129.429	129.998	130.567	
GROSS TAX	43.874	43.045	39.811	38.851	39.287	39.549	39.811	
INVESTMENT TAX CREDIT	0.	3.792	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.253	39.811	38.851	39.287	39.549	39.811	
NET INCOME	95.526	88.865	90.756	92.284	92.417	92.724	93.031	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	11.281	8.833	8.264	7.696	7.127	6.558	49.760
TAX SAVINGS	0.	4.621	4.063	5.023	4.587	4.325	4.063	26.681
NET COMPLIANCE MEASURE COST	0.	6.661	4.770	3.242	3.109	2.802	2.495	23.078
AVERAGE ANNUAL NET COST		3.846						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 16.242	COHORT1 19.475	COHORT2 17.704	COHORT3 16.095	COHORT4 14.632	COHORT5 13.302	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 1. 1 MICROWATT PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	18.893	15.324	14.383	13.442	12.501	11.559	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	120.507	124.076	125.017	125.958	126.899	127.841	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	9.412	9.412	9.412	9.412	9.412	
(-) DEPRECIATION	0.	0.	9.412	13.804	13.177	13.177	13.177	
TAXABLE INCOME	139.400	136.194	124.076	120.625	122.194	123.135	124.076	
GROSS TAX	43.874	42.399	36.825	35.237	35.959	36.392	36.825	
INVESTMENT TAX CREDIT	0.	6.275	0.	0.	0.	0.	0.	
NET TAXES	43.874	36.125	36.825	35.237	35.959	36.392	36.825	
NET INCOME	95.526	84.383	87.251	89.780	89.999	90.508	91.016	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	18.893	15.324	14.383	13.442	12.501	11.559	86.101
TAX SAVINGS	0.	7.749	7.049	8.637	7.915	7.482	7.049	45.881
NET COMPLIANCE MEASURE COST	0.	11.143	8.275	5.746	5.527	5.018	4.510	40.220
AVERAGE ANNUAL NET COST		6.703						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 28.185	COHORT1 33.796	COHORT2 30.723	COHORT3 27.930	COHORT4 25.391	COHORT5 23.083	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 1. 1 MICROWATT PER SQ. CM HIGH COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	26.555	21.920	20.640	19.360	18.079	16.799	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	112.845	117.480	118.760	120.040	121.321	122.601	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	12.804	12.804	12.804	12.804	12.804	
(-) DEPRECIATION	0.	0.	12.804	18.780	17.926	17.926	17.926	
TAXABLE INCOME	139.400	134.186	117.480	112.785	114.919	116.199	117.480	
GROSS TAX	43.874	41.476	33.791	31.631	32.613	33.202	33.791	
INVESTMENT TAX CREDIT	0.	8.536	0.	0.	0.	0.	0.	
NET TAXES	43.874	32.939	33.791	31.631	32.613	33.202	33.791	
NET INCOME	95.526	79.906	83.689	87.129	87.428	88.119	88.811	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	26.555	21.920	20.640	19.360	18.079	16.799	123.353
TAX SAVINGS	0.	10.935	10.083	12.243	11.261	10.672	10.083	65.278
NET COMPLIANCE MEASURE COST	0.	15.620	11.837	8.397	8.098	7.407	6.715	58.074
AVERAGE ANNUAL NET COST		9.679						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 40.559	COHORT1 48.633	COHORT2 44.212	COHORT3 40.193	COHORT4 36.539	COHORT5 33.217	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 2. 10 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	6.216	4.253	3.976	3.698	3.420	3.143	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	133.184	135.147	135.424	135.702	135.980	136.257	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.775	2.775	2.775	2.775	2.775	
(-) DEPRECIATION	0.	0.	2.775	4.071	3.885	3.885	3.885	
TAXABLE INCOME	139.400	137.810	135.147	134.129	134.592	134.869	135.147	
GROSS TAX	43.874	43.143	41.918	41.449	41.662	41.790	41.918	
INVESTMENT TAX CREDIT	0.	1.850	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.292	41.918	41.449	41.662	41.790	41.918	
NET INCOME	95.526	91.892	93.229	93.975	94.040	94.190	94.339	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	6.216	4.253	3.976	3.698	3.420	3.143	24.706
TAX SAVINGS	0.	2.582	1.956	2.425	2.212	2.084	1.956	13.215
NET COMPLIANCE MEASURE COST	0.	3.634	2.297	1.551	1.486	1.336	1.187	11.491
AVERAGE ANNUAL NET COST		1.915						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 8.148	COHORT1 9.770	COHORT2 8.882	COHORT3 8.074	COHORT4 7.340	COHORT5 6.673	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 2. 10 MICROWATT PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	12.539	9.521	8.910	8.300	7.689	7.078	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	126.861	129.879	130.490	131.100	131.711	132.322	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	6.107	6.107	6.107	6.107	6.107	
(-) DEPRECIATION	0.	0.	6.107	8.957	8.550	8.550	8.550	
TAXABLE INCOME	139.400	137.040	129.879	127.640	128.658	129.268	129.879	
GROSS TAX	43.874	42.788	39.494	38.464	38.932	39.213	39.494	
INVESTMENT TAX CREDIT	0.	4.071	0.	0.	0.	0.	0.	
NET TAXES	43.874	38.717	39.494	38.464	38.932	39.213	39.494	
NET INCOME	95.526	88.144	90.385	92.025	92.168	92.498	92.828	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	12.539	9.521	8.910	8.300	7.689	7.078	54.036
TAX SAVINGS	0.	5.157	4.380	5.410	4.942	4.661	4.380	28.928
NET COMPLIANCE MEASURE COST	0.	7.382	5.141	3.501	3.358	3.028	2.698	25.108
AVERAGE ANNUAL NET COST		4.185						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 17.693	COHORT1 21.215	COHORT2 19.287	COHORT3 17.533	COHORT4 15.939	COHORT5 14.490	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 2. 10 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	17.442	13.528	12.681	11.833	10.985	10.137	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	121.958	125.872	126.719	127.567	128.415	129.263	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	8.479	8.479	8.479	8.479	8.479	
(-) DEPRECIATION	0.	0.	8.479	12.435	11.870	11.870	11.870	
TAXABLE INCOME	139.400	136.090	125.872	122.763	124.176	125.024	125.872	
GROSS TAX	43.874	42.351	37.651	36.221	36.871	37.261	37.651	
INVESTMENT TAX CREDIT	0.	5.652	0.	0.	0.	0.	0.	
NET TAXES	43.874	36.699	37.651	36.221	36.871	37.261	37.651	
NET INCOME	95.526	85.260	88.221	90.499	90.696	91.154	91.612	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	17.442	13.528	12.681	11.833	10.985	10.137	76.605
TAX SAVINGS	0.	7.175	6.223	7.653	7.003	6.613	6.223	40.891
NET COMPLIANCE MEASURE COST	0.	10.266	7.305	5.027	4.830	4.372	3.914	35.714
AVERAGE ANNUAL NET COST		5.952						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 25.109	COHORT1 30.107	COHORT2 27.370	COHORT3 24.882	COHORT4 22.620	COHORT5 20.564	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 3. 20 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	6.138	4.181	3.907	3.633	3.359	3.085	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	133.262	135.219	135.493	135.767	136.041	136.315	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.740	2.740	2.740	2.740	2.740	
(-) DEPRECIATION	0.	0.	2.740	4.019	3.836	3.836	3.836	
TAXABLE INCOME	139.400	137.829	135.219	134.214	134.671	134.945	135.219	
GROSS TAX	43.874	43.151	41.951	41.488	41.698	41.825	41.951	
INVESTMENT TAX CREDIT	0.	1.827	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.325	41.951	41.488	41.698	41.825	41.951	
NET INCOME	95.526	91.937	93.268	94.004	94.068	94.216	94.364	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	6.138	4.181	3.907	3.633	3.359	3.085	24.305
TAX SAVINGS	0.	2.549	1.923	2.386	2.176	2.049	1.923	13.007
NET COMPLIANCE MEASURE COST	0.	3.589	2.258	1.522	1.458	1.310	1.162	11.298
AVERAGE ANNUAL NET COST		1.883						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 8.015	COHORT1 9.610	COHORT2 8.737	COHORT3 7.942	COHORT4 7.220	COHORT5 6.564	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 3. 20 MICROWATT PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	12.315	9.312	8.710	8.109	7.507	6.905	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	127.085	130.088	130.690	131.291	131.893	132.495	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	6.018	6.018	6.018	6.018	6.018	
(-) DEPRECIATION	0.	0.	6.018	8.826	8.425	8.425	8.425	
TAXABLE INCOME	139.400	137.115	130.088	127.881	128.884	129.486	130.088	
GROSS TAX	43.874	42.823	39.590	38.575	39.037	39.314	39.590	
INVESTMENT TAX CREDIT	0.	4.012	0.	0.	0.	0.	0.	
NET TAXES	43.874	38.811	39.590	38.575	39.037	39.314	39.590	
NET INCOME	95.526	88.274	90.497	92.114	92.255	92.580	92.905	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	12.315	9.312	8.710	8.109	7.507	6.905	52.858
TAX SAVINGS	0.	5.063	4.284	5.299	4.837	4.560	4.284	28.327
NET COMPLIANCE MEASURE COST	0.	7.252	5.029	3.412	3.271	2.946	2.621	24.531
AVERAGE ANNUAL NET COST		4.089						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 17.297	COHORT1 20.741	COHORT2 18.855	COHORT3 17.141	COHORT4 15.583	COHORT5 14.166	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 3. 20 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	16.964	13.082	12.252	11.423	10.594	9.764	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	122.436	126.318	127.148	127.977	128.806	129.636	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	8.293	8.293	8.293	8.293	8.293	
(-) DEPRECIATION	0.	0.	8.293	12.164	11.611	11.611	11.611	
TAXABLE INCOME	139.400	136.258	126.318	123.277	124.660	125.489	126.318	
GROSS TAX	43.874	42.429	37.856	36.458	37.093	37.475	37.856	
INVESTMENT TAX CREDIT	0.	5.529	0.	0.	0.	0.	0.	
NET TAXES	43.874	36.900	37.856	36.458	37.093	37.475	37.856	
NET INCOME	95.526	85.536	88.462	90.690	90.884	91.331	91.779	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	16.964	13.082	12.252	11.423	10.594	9.764	74.079
TAX SAVINGS	0.	6.974	6.018	7.416	6.781	6.399	6.018	39.605
NET COMPLIANCE MEASURE COST	0.	9.990	7.064	4.836	4.642	4.195	3.747	34.474
AVERAGE ANNUAL NET COST		5.746						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 24.258	COHORT1 29.088	COHORT2 26.443	COHORT3 24.040	COHORT4 21.854	COHORT5 19.867	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 4. 50 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.921	3.984	3.722	3.460	3.197	2.935	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	133.479	135.416	135.678	135.940	136.203	136.465	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.623	2.623	2.623	2.623	2.623	
(-) DEPRECIATION	0.	0.	2.623	3.847	3.672	3.672	3.672	
TAXABLE INCOME	139.400	137.850	135.416	134.454	134.891	135.154	135.416	
GROSS TAX	43.874	43.161	42.041	41.599	41.800	41.921	42.041	
INVESTMENT TAX CREDIT	0.	1.749	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.412	42.041	41.599	41.800	41.921	42.041	
NET INCOME	95.526	92.066	93.375	94.079	94.140	94.282	94.424	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	5.921	3.984	3.722	3.460	3.197	2.935	23.219
TAX SAVINGS	0.	2.462	1.833	2.275	2.074	1.953	1.833	12.429
NET COMPLIANCE MEASURE COST	0.	3.460	2.151	1.447	1.386	1.244	1.102	10.790
AVERAGE ANNUAL NET COST		1.798						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 7.661	COHORT1 9.186	COHORT2 8.351	COHORT3 7.592	COHORT4 6.902	COHORT5 6.274	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 4. 50 MICROWATT PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	11.872	8.904	8.324	7.744	7.163	6.583	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	127.528	130.496	131.076	131.656	132.237	132.817	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.804	5.804	5.804	5.804	5.804	
(-) DEPRECIATION	0.	0.	5.804	8.512	8.125	8.125	8.125	
TAXABLE INCOME	139.400	137.201	130.496	128.368	129.335	129.915	130.496	
GROSS TAX	43.874	42.863	39.778	38.799	39.244	39.511	39.778	
INVESTMENT TAX CREDIT	0.	3.869	0.	0.	0.	0.	0.	
NET TAXES	43.874	38.993	39.778	38.799	39.244	39.511	39.778	
NET INCOME	95.526	88.535	90.718	92.277	92.412	92.726	93.039	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	11.872	8.904	8.324	7.744	7.163	6.583	50.589
TAX SAVINGS	0.	4.881	4.096	5.075	4.630	4.363	4.096	27.140
NET COMPLIANCE MEASURE COST	0.	6.991	4.808	3.249	3.114	2.800	2.487	23.449
AVERAGE ANNUAL NET COST		3.908						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 16.549	COHORT1 19.844	COHORT2 18.040	COHORT3 16.400	COHORT4 14.909	COHORT5 13.553	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 4. 50 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	16.203	12.378	11.583	10.787	9.992	9.196	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	123.197	127.022	127.817	128.613	129.408	130.204	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	7.954	7.954	7.954	7.954	7.954	
(-) DEPRECIATION	0.	0.	7.954	11.665	11.135	11.135	11.135	
TAXABLE INCOME	139.400	136.452	127.022	124.106	125.431	126.227	127.022	
GROSS TAX	43.874	42.518	38.180	36.839	37.448	37.814	38.180	
INVESTMENT TAX CREDIT	0.	5.302	0.	0.	0.	0.	0.	
NET TAXES	43.874	37.216	38.180	36.839	37.448	37.814	38.180	
NET INCOME	95.526	85.981	88.842	90.979	91.164	91.594	92.023	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	16.203	12.378	11.583	10.787	9.992	9.196	70.139
TAX SAVINGS	0.	6.658	5.694	7.035	6.426	6.060	5.694	37.566
NET COMPLIANCE MEASURE COST	0.	9.545	6.684	4.547	4.362	3.932	3.503	32.573
AVERAGE ANNUAL NET COST		5.429						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 22.949	COHORT1 27.517	COHORT2 25.016	COHORT3 22.741	COHORT4 20.674	COHORT5 18.795	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 5. 75 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.898	3.963	3.702	3.440	3.179	2.918	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	133.502	135.437	135.698	135.960	136.221	136.482	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.612	2.612	2.612	2.612	2.612	
(-) DEPRECIATION	0.	0.	2.612	3.831	3.656	3.656	3.656	
TAXABLE INCOME	139.400	137.855	135.437	134.480	134.915	135.176	135.437	
GROSS TAX	43.874	43.163	42.051	41.611	41.811	41.931	42.051	
INVESTMENT TAX CREDIT	0.	1.741	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.422	42.051	41.611	41.811	41.931	42.051	
NET INCOME	95.526	92.080	93.386	94.088	94.149	94.290	94.431	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	5.898	3.963	3.702	3.440	3.179	2.918	23.100
TAX SAVINGS	0.	2.452	1.823	2.263	2.063	1.943	1.823	12.367
NET COMPLIANCE MEASURE COST	0.	3.446	2.140	1.438	1.377	1.236	1.095	10.733
AVERAGE ANNUAL NET COST		1.789						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 7.622	COHORT1 9.139	COHORT2 8.308	COHORT3 7.553	COHORT4 6.866	COHORT5 6.242	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 5. 75 MICROWATT PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	11.832	8.867	8.288	7.709	7.130	6.551	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	127.568	130.533	131.112	131.691	132.270	132.849	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.791	5.791	5.791	5.791	5.791	
(-) DEPRECIATION	0.	0.	5.791	8.494	8.108	8.108	8.108	
TAXABLE INCOME	139.400	137.220	130.533	128.410	129.375	129.954	130.533	
GROSS TAX	43.874	42.871	39.795	38.818	39.262	39.529	39.795	
INVESTMENT TAX CREDIT	0.	3.861	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.010	39.795	38.818	39.262	39.529	39.795	
NET INCOME	95.526	88.558	90.738	92.294	92.429	92.742	93.054	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	11.832	8.867	8.288	7.709	7.130	6.551	50.376
TAX SAVINGS	0.	4.864	4.079	5.056	4.612	4.345	4.079	27.034
NET COMPLIANCE MEASURE COST	0.	6.968	4.788	3.232	3.097	2.784	2.472	23.342
AVERAGE ANNUAL NET COST		3.890						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 16.476	COHORT1 19.756	COHORT2 17.960	COHORT3 16.327	COHORT4 14.843	COHORT5 13.494	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 5. 75 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	16.116	12.295	11.502	10.710	9.917	9.124	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	123.284	127.105	127.898	128.690	129.483	130.276	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	7.926	7.926	7.926	7.926	7.926	
(-) DEPRECIATION	0.	0.	7.926	11.625	11.096	11.096	11.096	
TAXABLE INCOME	139.400	136.494	127.105	124.199	125.520	126.312	127.105	
GROSS TAX	43.874	42.537	38.218	36.881	37.489	37.854	38.218	
INVESTMENT TAX CREDIT	0.	5.284	0.	0.	0.	0.	0.	
NET TAXES	43.874	37.253	38.218	36.881	37.489	37.854	38.218	
NET INCOME	95.526	86.031	88.887	91.016	91.201	91.629	92.057	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	16.116	12.295	11.502	10.710	9.917	9.124	69.664
TAX SAVINGS	0.	6.621	5.656	6.993	6.385	6.020	5.656	37.330
NET COMPLIANCE MEASURE COST	0.	9.495	6.639	4.510	4.325	3.897	3.469	32.335
AVERAGE ANNUAL NET COST		5.389						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 22.786	COHORT1 27.323	COHORT2 24.839	COHORT3 22.581	COHORT4 20.528	COHORT5 18.662	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 6. 100 MICROWATT PER SQ. CM

LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.818	3.889	3.631	3.373	3.115	2.858	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	133.582	135.511	135.769	136.027	136.285	136.542	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.577	2.577	2.577	2.577	2.577	
(-) DEPRECIATION	0.	0.	2.577	3.780	3.608	3.608	3.608	
TAXABLE INCOME	139.400	137.877	135.511	134.567	134.996	135.254	135.511	
GROSS TAX	43.874	43.173	42.085	41.651	41.848	41.967	42.085	
INVESTMENT TAX CREDIT	0.	1.718	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.455	42.085	41.651	41.848	41.967	42.085	
NET INCOME	95.526	92.127	93.426	94.119	94.179	94.318	94.457	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	5.818	3.889	3.631	3.373	3.115	2.858	22.684
TAX SAVINGS	0.	2.419	1.789	2.223	2.026	1.907	1.789	12.153
NET COMPLIANCE MEASURE COST	0.	3.399	2.100	1.407	1.347	1.208	1.069	10.531
AVERAGE ANNUAL NET COST		1.755						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 7.483	COHORT1 8.973	COHORT2 8.157	COHORT3 7.416	COHORT4 6.741	COHORT5 6.129	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 6. 100 MICROWATT PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	11.641	8.686	8.113	7.540	6.968	6.395	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	127.759	130.714	131.287	131.860	132.432	133.005	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.729	5.729	5.729	5.729	5.729	
(-) DEPRECIATION	0.	0.	5.729	8.403	8.021	8.021	8.021	
TAXABLE INCOME	139.400	137.308	130.714	128.613	129.568	130.141	130.714	
GROSS TAX	43.874	42.912	39.878	38.912	39.351	39.615	39.878	
INVESTMENT TAX CREDIT	0.	3.820	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.092	39.878	38.912	39.351	39.615	39.878	
NET INCOME	95.526	88.667	90.835	92.375	92.508	92.818	93.127	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	11.641	8.686	8.113	7.540	6.968	6.395	49.344
TAX SAVINGS	0.	4.782	3.996	4.962	4.523	4.259	3.996	26.518
NET COMPLIANCE MEASURE COST	0.	6.859	4.691	3.151	3.018	2.708	2.399	22.826
AVERAGE ANNUAL NET COST		3.804						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 16.124	COHORT1 19.334	COHORT2 17.577	COHORT3 15.979	COHORT4 14.526	COHORT5 13.206	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 6. 100 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	15.689	11.891	11.112	10.333	9.554	8.775	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	123.711	127.509	128.288	129.067	129.846	130.625	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	7.789	7.789	7.789	7.789	7.789	
(-) DEPRECIATION	0.	0.	7.789	11.423	10.904	10.904	10.904	
TAXABLE INCOME	139.400	136.692	127.509	124.653	125.952	126.730	127.509	
GROSS TAX	43.874	42.628	38.404	37.091	37.688	38.046	38.404	
INVESTMENT TAX CREDIT	0.	5.192	0.	0.	0.	0.	0.	
NET TAXES	43.874	37.436	38.404	37.091	37.688	38.046	38.404	
NET INCOME	95.526	86.275	89.105	91.198	91.379	91.800	92.220	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	15.689	11.891	11.112	10.333	9.554	8.775	67.354
TAX SAVINGS	0.	6.438	5.470	6.783	6.186	5.828	5.470	36.175
NET COMPLIANCE MEASURE COST	0.	9.251	6.421	4.328	4.147	3.726	3.306	31.179
AVERAGE ANNUAL NET COST		5.196						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 21.999	COHORT1 26.378	COHORT2 23.980	COHORT3 21.800	COHORT4 19.818	COHORT5 18.017	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 7. 200 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.739	3.817	3.563	3.309	3.056	2.802	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	133.661	135.583	135.837	136.091	136.344	136.598	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.537	2.537	2.537	2.537	2.537	
(-) DEPRECIATION	0.	0.	2.537	3.721	3.551	3.551	3.551	
TAXABLE INCOME	139.400	137.889	135.583	134.653	135.076	135.330	135.583	
GROSS TAX	43.874	43.179	42.118	41.691	41.885	42.002	42.118	
INVESTMENT TAX CREDIT	0.	1.691	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.488	42.118	41.691	41.885	42.002	42.118	
NET INCOME	95.526	92.173	93.465	94.147	94.206	94.343	94.480	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	5.739	3.817	3.563	3.309	3.056	2.802	22.285
TAX SAVINGS	0.	2.386	1.756	2.183	1.989	1.872	1.756	11.942
NET COMPLIANCE MEASURE COST	0.	3.353	2.061	1.379	1.320	1.183	1.046	10.343
AVERAGE ANNUAL NET COST		1.724						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 7.352	COHORT1 8.816	COHORT2 8.015	COHORT3 7.286	COHORT4 6.624	COHORT5 6.022	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 7. 200 MICROWATT PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	11.444	8.504	7.940	7.376	6.812	6.248	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	127.956	130.896	131.460	132.024	132.588	133.152	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.639	5.639	5.639	5.639	5.639	
(-) DEPRECIATION	0.	0.	5.639	8.270	7.894	7.894	7.894	
TAXABLE INCOME	139.400	137.354	130.896	128.829	129.768	130.332	130.896	
GROSS TAX	43.874	42.933	39.962	39.011	39.443	39.703	39.962	
INVESTMENT TAX CREDIT	0.	3.759	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.174	39.962	39.011	39.443	39.703	39.962	
NET INCOME	95.526	88.783	90.934	92.449	92.580	92.885	93.189	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	11.444	8.504	7.940	7.376	6.812	6.248	48.324
TAX SAVINGS	0.	4.700	3.912	4.863	4.431	4.171	3.912	25.988
NET COMPLIANCE MEASURE COST	0.	6.743	4.592	3.077	2.946	2.641	2.337	22.336
AVERAGE ANNUAL NET COST		3.723						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 15.786	COHORT1 18.929	COHORT2 17.208	COHORT3 15.644	COHORT4 14.221	COHORT5 12.929	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 7. 200 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	15.336	11.563	10.799	10.035	9.271	8.507	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	124.064	127.837	128.601	129.365	130.129	130.893	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	7.640	7.640	7.640	7.640	7.640	
(-) DEPRECIATION	0.	0.	7.640	11.206	10.697	10.697	10.697	
TAXABLE INCOME	139.400	136.798	127.837	125.036	126.309	127.073	127.837	
GROSS TAX	43.874	42.677	38.555	37.266	37.852	38.204	38.555	
INVESTMENT TAX CREDIT	0.	5.094	0.	0.	0.	0.	0.	
NET TAXES	43.874	37.583	38.555	37.266	37.852	38.204	38.555	
NET INCOME	95.526	86.480	89.282	91.335	91.513	91.926	92.338	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	15.336	11.563	10.799	10.035	9.271	8.507	65.511
TAX SAVINGS	0.	6.291	5.319	6.608	6.022	5.670	5.319	35.229
NET COMPLIANCE MEASURE COST	0.	9.046	6.244	4.191	4.013	3.600	3.188	30.282
AVERAGE ANNUAL NET COST		5.047						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 21.383	COHORT1 25.640	COHORT2 23.309	COHORT3 21.190	COHORT4 19.263	COHORT5 17.512	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 8. 300 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.671	3.753	3.503	3.253	3.003	2.753	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	133.729	135.647	135.897	136.147	136.397	136.647	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.502	2.502	2.502	2.502	2.502	
(-) DEPRECIATION	0.	0.	2.502	3.670	3.503	3.503	3.503	
TAXABLE INCOME	139.400	137.900	135.647	134.729	135.146	135.396	135.647	
GROSS TAX	43.874	43.184	42.147	41.725	41.917	42.032	42.147	
INVESTMENT TAX CREDIT	0.	1.668	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.516	42.147	41.725	41.917	42.032	42.147	
NET INCOME	95.526	92.214	93.499	94.171	94.230	94.365	94.500	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	5.671	3.753	3.503	3.253	3.003	2.753	21.936
TAX SAVINGS	0.	2.358	1.727	2.149	1.957	1.842	1.727	11.759
NET COMPLIANCE MEASURE COST	0.	3.312	2.027	1.355	1.296	1.161	1.026	10.177
AVERAGE ANNUAL NET COST		1.696						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 7.238	COHORT1 8.678	COHORT2 7.889	COHORT3 7.172	COHORT4 6.520	COHORT5 5.927	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 8. 300 MICROWATT PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	11.294	8.365	7.807	7.250	6.692	6.134	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	128.106	131.035	131.593	132.150	132.708	133.266	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.577	5.577	5.577	5.577	5.577	
(-) DEPRECIATION	0.	0.	5.577	8.179	7.807	7.807	7.807	
TAXABLE INCOME	139.400	137.400	131.035	128.990	129.920	130.477	131.035	
GROSS TAX	43.874	42.954	40.026	39.086	39.513	39.770	40.026	
INVESTMENT TAX CREDIT	0.	3.718	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.236	40.026	39.086	39.513	39.770	40.026	
NET INCOME	95.526	88.869	91.009	92.507	92.637	92.938	93.240	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	11.294	8.365	7.807	7.250	6.692	6.134	47.543
TAX SAVINGS	0.	4.638	3.848	4.788	4.361	4.104	3.848	25.587
NET COMPLIANCE MEASURE COST	0.	6.657	4.517	3.019	2.889	2.588	2.286	21.955
AVERAGE ANNUAL NET COST		3.659						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 15.525	COHORT1 18.615	COHORT2 16.923	COHORT3 15.385	COHORT4 13.986	COHORT5 12.715	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 8. 300 MICROWATT PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	11.294	8.365	7.807	7.250	6.692	6.134	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	128.106	131.035	131.593	132.150	132.708	133.266	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.577	5.577	5.577	5.577	5.577	
(-) DEPRECIATION	0.	0.	5.577	8.179	7.807	7.807	7.807	
TAXABLE INCOME	139.400	137.400	131.035	128.990	129.920	130.477	131.035	
GROSS TAX	43.874	42.954	40.026	39.086	39.513	39.770	40.026	
INVESTMENT TAX CREDIT	0.	3.718	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.236	40.026	39.086	39.513	39.770	40.026	
NET INCOME	95.526	88.869	91.009	92.507	92.637	92.938	93.240	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	11.294	8.365	7.807	7.250	6.692	6.134	47.543
TAX SAVINGS	0.	4.638	3.848	4.788	4.361	4.104	3.848	25.587
NET COMPLIANCE MEASURE COST	0.	6.657	4.517	3.019	2.889	2.588	2.286	21.955
AVERAGE ANNUAL NET COST		3.659						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 15.525	COHORT1 18.615	COHORT2 16.923	COHORT3 15.385	COHORT4 13.986	COHORT5 12.715	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 8. 300 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	15.040	11.286	10.534	9.781	9.029	8.276	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	124.360	128.114	128.866	129.619	130.371	131.124	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	7.524	7.524	7.524	7.524	7.524	
(-) DEPRECIATION	0.	0.	7.524	11.035	10.534	10.534	10.534	
TAXABLE INCOME	139.400	136.900	128.114	125.355	126.609	127.362	128.114	
GROSS TAX	43.874	42.724	38.682	37.413	37.990	38.336	38.682	
INVESTMENT TAX CREDIT	0.	5.016	0.	0.	0.	0.	0.	
NET TAXES	43.874	37.708	38.682	37.413	37.990	38.336	38.682	
NET INCOME	95.526	86.652	89.432	91.453	91.629	92.035	92.441	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	15.040	11.286	10.534	9.781	9.029	8.276	63.946
TAX SAVINGS	0.	6.166	5.192	6.461	5.884	5.538	5.192	34.431
NET COMPLIANCE MEASURE COST	0.	8.874	6.094	4.073	3.897	3.491	3.085	29.515
AVERAGE ANNUAL NET COST		4.919						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 20.857	COHORT1 25.009	COHORT2 22.735	COHORT3 20.668	COHORT4 18.789	COHORT5 17.081	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 9. 400 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.586	3.678	3.433	3.187	2.942	2.697	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	133.814	135.722	135.967	136.213	136.458	136.703	
TAX PURPOSE ADJUSTMENT TO								
(+) AMORTIZATION	0.	0.	2.452	2.452	2.452	2.452	2.452	
(-) DEPRECIATION	0.	0.	2.452	3.596	3.433	3.433	3.433	
TAXABLE INCOME	139.400	137.900	135.722	134.823	135.232	135.477	135.722	
GROSS TAX	43.874	43.184	42.182	41.769	41.957	42.069	42.182	
INVESTMENT TAX CREDIT	0.	1.635	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.549	42.182	41.769	41.957	42.069	42.182	
NET INCOME	95.526	92.264	93.540	94.199	94.256	94.388	94.521	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	5.586	3.678	3.433	3.187	2.942	2.697	21.523
TAX SAVINGS	0.	2.325	1.692	2.105	1.917	1.805	1.692	11.535
NET COMPLIANCE MEASURE COST	0.	3.262	1.986	1.327	1.270	1.138	1.005	9.988
AVERAGE ANNUAL NET COST		1.665						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 7.105	COHORT1 8.520	COHORT2 7.745	COHORT3 7.041	COHORT4 6.401	COHORT5 5.819	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 9. 400 MICROWATT PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	11.103	8.192	7.646	7.100	6.554	6.008	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	128.297	131.208	131.754	132.300	132.846	133.392	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.462	5.462	5.462	5.462	5.462	
(-) DEPRECIATION	0.	0.	5.462	8.010	7.646	7.646	7.646	
TAXABLE INCOME	139.400	137.400	131.208	129.205	130.115	130.661	131.208	
GROSS TAX	43.874	42.954	40.105	39.184	39.603	39.854	40.105	
INVESTMENT TAX CREDIT	0.	3.641	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.313	40.105	39.184	39.603	39.854	40.105	
NET INCOME	95.526	88.984	91.102	92.569	92.697	92.992	93.287	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	11.103	8.192	7.646	7.100	6.554	6.008	46.603
TAX SAVINGS	0.	4.561	3.769	4.690	4.271	4.020	3.769	25.078
NET COMPLIANCE MEASURE COST	0.	6.542	4.424	2.957	2.829	2.534	2.239	21.525
AVERAGE ANNUAL NET COST		3.587						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 15.223	COHORT1 18.254	COHORT2 16.594	COHORT3 15.086	COHORT4 13.714	COHORT5 12.467	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 9. 400 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	14.789	11.060	10.323	9.586	8.848	8.111	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	124.611	128.340	129.077	129.814	130.552	131.289	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	7.374	7.374	7.374	7.374	7.374	
(-) DEPRECIATION	0.	0.	7.374	10.815	10.323	10.323	10.323	
TAXABLE INCOME	139.400	136.900	128.340	125.636	126.865	127.602	128.340	
GROSS TAX	43.874	42.724	38.786	37.543	38.108	38.447	38.786	
INVESTMENT TAX CREDIT	0.	4.916	0.	0.	0.	0.	0.	
NET TAXES	43.874	37.808	38.786	37.543	38.108	38.447	38.786	
NET INCOME	95.526	86.802	89.553	91.534	91.706	92.105	92.503	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	14.789	11.060	10.323	9.586	8.848	8.111	62.718
TAX SAVINGS	0.	6.066	5.088	6.331	5.766	5.427	5.088	33.766
NET COMPLIANCE MEASURE COST	0.	8.724	5.973	3.992	3.820	3.421	3.023	28.952
AVERAGE ANNUAL NET COST		4.825						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 20.462	COHORT1 24.536	COHORT2 22.305	COHORT3 20.277	COHORT4 18.434	COHORT5 16.758	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 10. 500 MICROWATT PER SQ. CM LOW COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.565	3.659	3.415	3.171	2.927	2.683	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	133.835	135.741	135.985	136.229	136.473	136.717	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.439	2.439	2.439	2.439	2.439	
(-) DEPRECIATION	0.	0.	2.439	3.578	3.415	3.415	3.415	
TAXABLE INCOME	139.400	137.900	135.741	134.847	135.253	135.497	135.741	
GROSS TAX	43.874	43.184	42.191	41.779	41.966	42.079	42.191	
INVESTMENT TAX CREDIT	0.	1.626	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.558	42.191	41.779	41.966	42.079	42.191	
NET INCOME	95.526	92.277	93.550	94.206	94.262	94.394	94.526	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	5.565	3.659	3.415	3.171	2.927	2.683	21.421
TAX SAVINGS	0.	2.316	1.683	2.095	1.908	1.795	1.683	11.480
NET COMPLIANCE MEASURE COST	0.	3.249	1.976	1.320	1.264	1.132	1.000	9.941
AVERAGE ANNUAL NET COST		1.657						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 7.072	COHORT1 8.480	COHORT2 7.709	COHORT3 7.008	COHORT4 6.371	COHORT5 5.792	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 10. 500 MICROWATT PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	11.060	8.154	7.610	7.067	6.523	5.980	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	128.340	131.246	131.790	132.333	132.877	133.420	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.436	5.436	5.436	5.436	5.436	
(-) DEPRECIATION	0.	0.	5.436	7.973	7.610	7.610	7.610	
TAXABLE INCOME	139.400	137.400	131.246	129.253	130.159	130.702	131.246	
GROSS TAX	43.874	42.954	40.123	39.206	39.623	39.873	40.123	
INVESTMENT TAX CREDIT	0.	3.624	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.330	40.123	39.206	39.623	39.873	40.123	
NET INCOME	95.526	89.010	91.123	92.583	92.710	93.004	93.297	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	11.060	8.154	7.610	7.067	6.523	5.980	46.394
TAX SAVINGS	0.	4.544	3.751	4.668	4.251	4.001	3.751	24.965
NET COMPLIANCE MEASURE COST	0.	6.516	4.403	2.943	2.816	2.522	2.229	21.429
AVERAGE ANNUAL NET COST		3.571						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 15.156	COHORT1 18.173	COHORT2 16.521	COHORT3 15.019	COHORT4 13.654	COHORT5 12.413	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 10. 500 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	14.731	11.008	10.274	9.541	8.807	8.073	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	124.669	128.392	129.126	129.859	130.593	131.327	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	7.339	7.339	7.339	7.339	7.339	
(-) DEPRECIATION	0.	0.	7.339	10.764	10.274	10.274	10.274	
TAXABLE INCOME	139.400	136.900	128.392	125.701	126.924	127.658	128.392	
GROSS TAX	43.874	42.724	38.810	37.572	38.135	38.473	38.810	
INVESTMENT TAX CREDIT	0.	4.893	0.	0.	0.	0.	0.	
NET TAXES	43.874	37.831	38.810	37.572	38.135	38.473	38.810	
NET INCOME	95.526	86.837	89.582	91.553	91.724	92.121	92.517	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	14.731	11.008	10.274	9.541	8.807	8.073	62.434
TAX SAVINGS	0.	6.043	5.064	6.302	5.739	5.401	5.064	33.612
NET COMPLIANCE MEASURE COST	0.	8.689	5.944	3.973	3.802	3.405	3.009	28.822
AVERAGE ANNUAL NET COST		4.804						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 20.371	COHORT1 24.427	COHORT2 22.206	COHORT3 20.187	COHORT4 18.352	COHORT5 16.684	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 11. 600 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.476	3.579	3.340	3.101	2.863	2.624	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	133.924	135.821	136.060	136.299	136.537	136.776	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.386	2.386	2.386	2.386	2.386	
(-) DEPRECIATION	0.	0.	2.386	3.499	3.340	3.340	3.340	
TAXABLE INCOME	139.400	137.900	135.821	134.947	135.344	135.583	135.821	
GROSS TAX	43.874	43.184	42.228	41.826	42.008	42.118	42.228	
INVESTMENT TAX CREDIT	0.	1.590	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.594	42.228	41.826	42.008	42.118	42.228	
NET INCOME	95.526	92.330	93.594	94.235	94.290	94.419	94.548	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	5.476	3.579	3.340	3.101	2.863	2.624	20.983
TAX SAVINGS	0.	2.280	1.646	2.048	1.866	1.756	1.646	11.243
NET COMPLIANCE MEASURE COST	0.	3.196	1.932	1.291	1.236	1.107	0.978	9.740
AVERAGE ANNUAL NET COST		1.623						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 6.932	COHORT1 8.312	COHORT2 7.556	COHORT3 6.869	COHORT4 6.245	COHORT5 5.677	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 11. 600 MICROWATT PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	10.874	7.987	7.454	6.922	6.389	5.857	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	128.526	131.413	131.946	132.478	133.011	133.543	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.325	5.325	5.325	5.325	5.325	
(-) DEPRECIATION	0.	0.	5.325	7.809	7.454	7.454	7.454	
TAXABLE INCOME	139.400	137.400	131.413	129.461	130.348	130.881	131.413	
GROSS TAX	43.874	42.954	40.200	39.302	39.710	39.955	40.200	
INVESTMENT TAX CREDIT	0.	3.550	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.404	40.200	39.302	39.710	39.955	40.200	
NET INCOME	95.526	89.121	91.213	92.644	92.768	93.055	93.343	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	10.874	7.987	7.454	6.922	6.389	5.857	45.484
TAX SAVINGS	0.	4.470	3.674	4.572	4.164	3.919	3.674	24.472
NET COMPLIANCE MEASURE COST	0.	6.405	4.313	2.882	2.758	2.471	2.183	21.011
AVERAGE ANNUAL NET COST		3.502						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 14.864	COHORT1 17.823	COHORT2 16.202	COHORT3 14.729	COHORT4 13.390	COHORT5 12.173	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 11. 600 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	14.477	10.780	10.061	9.342	8.624	7.905	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	124.923	128.620	129.339	130.058	130.776	131.495	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	7.186	7.186	7.186	7.186	7.186	
(-) DEPRECIATION	0.	0.	7.186	10.540	10.061	10.061	10.061	
TAXABLE INCOME	139.400	136.900	128.620	125.985	127.183	127.902	128.620	
GROSS TAX	43.874	42.724	38.915	37.703	38.254	38.585	38.915	
INVESTMENT TAX CREDIT	0.	4.791	0.	0.	0.	0.	0.	
NET TAXES	43.874	37.933	38.915	37.703	38.254	38.585	38.915	
NET INCOME	95.526	86.990	89.705	91.636	91.803	92.191	92.580	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	14.477	10.780	10.061	9.342	8.624	7.905	61.189
TAX SAVINGS	0.	5.941	4.959	6.171	5.620	5.289	4.959	32.938
NET COMPLIANCE MEASURE COST	0.	8.536	5.821	3.890	3.723	3.335	2.946	28.251
AVERAGE ANNUAL NET COST		4.709						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 19.971	COHORT1 23.947	COHORT2 21.770	COHORT3 19.791	COHORT4 17.992	COHORT5 16.356	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 12. 700 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.329	3.447	3.217	2.987	2.757	2.527	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	134.070	135.953	136.183	136.413	136.643	136.873	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.298	2.298	2.298	2.298	2.298	
(-) DEPRECIATION	0.	0.	2.298	3.370	3.217	3.217	3.217	
TAXABLE INCOME	139.400	137.900	135.953	135.111	135.494	135.724	135.953	
GROSS TAX	43.874	43.184	42.289	41.901	42.077	42.183	42.289	
INVESTMENT TAX CREDIT	0.	1.532	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.652	42.289	41.901	42.077	42.183	42.289	
NET INCOME	95.526	92.418	93.665	94.282	94.336	94.460	94.584	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	5.329	3.447	3.217	2.987	2.757	2.527	20.265
TAX SAVINGS	0.	2.222	1.585	1.973	1.797	1.691	1.585	10.853
NET COMPLIANCE MEASURE COST	0.	3.108	1.861	1.244	1.190	1.066	0.942	9.411
AVERAGE ANNUAL NET COST		1.569						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 6.701	COHORT1 8.035	COHORT2 7.304	COHORT3 6.640	COHORT4 6.037	COHORT5 5.488	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 12. 700 MICROWATT PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	10.547	7.693	7.180	6.667	6.154	5.641	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	128.853	131.707	132.220	132.733	133.246	133.759	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.128	5.128	5.128	5.128	5.128	
(-) DEPRECIATION	0.	0.	5.128	7.522	7.180	7.180	7.180	
TAXABLE INCOME	139.400	137.400	131.707	129.827	130.682	131.195	131.707	
GROSS TAX	43.874	42.954	40.335	39.470	39.864	40.099	40.335	
INVESTMENT TAX CREDIT	0.	3.419	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.535	40.335	39.470	39.864	40.099	40.335	
NET INCOME	95.526	89.318	91.372	92.750	92.869	93.146	93.423	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	10.547	7.693	7.180	6.667	6.154	5.641	43.882
TAX SAVINGS	0.	4.339	3.539	4.404	4.010	3.775	3.539	23.605
NET COMPLIANCE MEASURE COST	0.	6.208	4.154	2.776	2.657	2.380	2.103	20.277
AVERAGE ANNUAL NET COST		3.380						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 14.349	COHORT1 17.206	COHORT2 15.642	COHORT3 14.220	COHORT4 12.927	COHORT5 11.752	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 12. 700 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	14.034	10.381	9.689	8.997	8.305	7.613	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	125.366	129.019	129.711	130.403	131.095	131.787	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	6.920	6.920	6.920	6.920	6.920	
(-) DEPRECIATION	0.	0.	6.920	10.150	9.689	9.689	9.689	
TAXABLE INCOME	139.400	136.900	129.019	126.482	127.635	128.327	129.019	
GROSS TAX	43.874	42.724	39.099	37.932	38.462	38.781	39.099	
INVESTMENT TAX CREDIT	0.	4.614	0.	0.	0.	0.	0.	
NET TAXES	43.874	38.110	39.099	37.932	38.462	38.781	39.099	
NET INCOME	95.526	87.256	89.920	91.780	91.941	92.315	92.689	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	14.034	10.381	9.689	8.997	8.305	7.613	59.017
TAX SAVINGS	0.	5.764	4.775	5.942	5.412	5.093	4.775	31.762
NET COMPLIANCE MEASURE COST	0.	8.270	5.606	3.746	3.585	3.211	2.837	27.256
AVERAGE ANNUAL NET COST		4.543						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 19.274	COHORT1 23.111	COHORT2 21.010	COHORT3 19.100	COHORT4 17.364	COHORT5 15.785	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 13. 800 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.250	3.375	3.150	2.925	2.700	2.475	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	134.150	136.025	136.250	136.475	136.700	136.925	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.250	2.250	2.250	2.250	2.250	
(-) DEPRECIATION	0.	0.	2.250	3.300	3.150	3.150	3.150	
TAXABLE INCOME	139.400	137.900	136.025	135.200	135.575	135.800	136.025	
GROSS TAX	43.874	43.184	42.321	41.942	42.114	42.218	42.321	
INVESTMENT TAX CREDIT	0.	1.500	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.684	42.321	41.942	42.114	42.218	42.321	
NET INCOME	95.526	92.466	93.703	94.308	94.360	94.482	94.603	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	5.250	3.375	3.150	2.925	2.700	2.475	19.877
TAX SAVINGS	0.	2.190	1.553	1.932	1.760	1.656	1.553	10.644
NET COMPLIANCE MEASURE COST	0.	3.060	1.823	1.218	1.166	1.044	0.923	9.233
AVERAGE ANNUAL NET COST		1.539						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 6.576	COHORT1 7.886	COHORT2 7.169	COHORT3 6.517	COHORT4 5.925	COHORT5 5.386	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 13. 800 MICROWATT PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	10.380	7.542	7.040	6.537	6.034	5.531	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	129.020	131.858	132.360	132.863	133.366	133.869	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.028	5.028	5.028	5.028	5.028	
(-) DEPRECIATION	0.	0.	5.028	7.375	7.040	7.040	7.040	
TAXABLE INCOME	139.400	137.400	131.858	130.014	130.852	131.355	131.858	
GROSS TAX	43.874	42.954	40.404	39.556	39.942	40.173	40.404	
INVESTMENT TAX CREDIT	0.	3.352	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.602	40.404	39.556	39.942	40.173	40.404	
NET INCOME	95.526	89.418	91.453	92.804	92.921	93.193	93.464	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	10.380	7.542	7.040	6.537	6.034	5.531	43.064
TAX SAVINGS	0.	4.272	3.470	4.318	3.932	3.701	3.470	23.162
NET COMPLIANCE MEASURE COST	0.	6.108	4.073	2.722	2.605	2.333	2.062	19.903
AVERAGE ANNUAL NET COST		3.317						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 14.087	COHORT1 16.891	COHORT2 15.356	COHORT3 13.960	COHORT4 12.691	COHORT5 11.537	

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United States
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Agency

Office of
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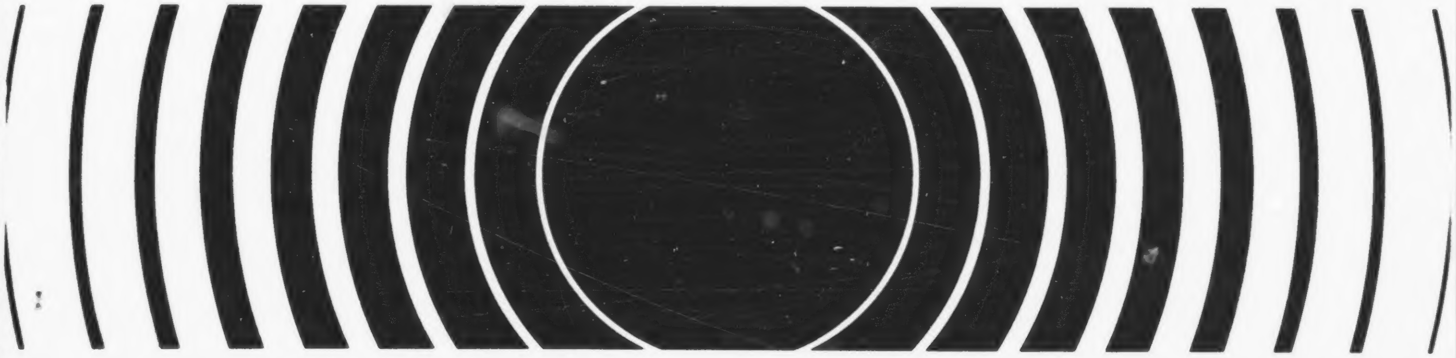
An Estimate of the Potential Costs of Guidelines Limiting Public Exposure to Radiofrequency Radiation from Broadcast Sources

Volume 2: Appendix
Part 2



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AN ESTIMATE OF THE POTENTIAL COSTS OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM BROADCAST SOURCES

Volume 2: Appendix
Part 2

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PREFACE

The purpose of the study reported here is to estimate the potential cost of a federal guidance proposed by the Environmental Protection Agency (EPA) limiting public exposure to radiofrequency (RF) radiation. An estimate of the economic effects of proposed federal actions is mandated by a series of Executive Orders (EOs), the latest of which is EO 12291, Federal Regulation, which is implemented by an Office of Management and Budget guidance on regulatory impact analysis and, in EPA, by a companion guideline for performing regulatory impact analyses. The federal radiofrequency radiation protection guidance has been developed by the EPA under the Federal Radiation Council Authority, 42 U.S.C. 2021(h), transferred to EPA by EO 10831, Reorganization Plan Number 3 of 1970 and by Public Law 86-373.

The EPA has conducted research over the past 12 years on the electromagnetic environment to which the public is exposed and on the propagation of RF by a wide variety of sources, the most significant of which are AM and FM radio, VHF-TV and UHF-TV broadcast stations. The cost study is limited to these significant sources of RF. One of the results of this study, in conjunction with EPA research, is a conceptual development of the type of mitigation measures necessary to effect compliance, as indicated by model results at 18 alternative guidance levels ranging from 1 $\mu W/cm^2$ (FM and TV) or 10 V/m (AM) to 10,000 $\mu W/cm^2$ (FM and TV) or 1,000 V/m (AM). The cost of compliance was estimated using a series of models that present a range (low, medium, and high) of costs to society-at-large, costs to the broadcast industry and costs to and effects on the net income of the average broadcast station. The costs are expressed in a variety of ways, including gross cost, net annual cash flow cost, average annual cash flow cost, and present value.

The report is organized into two volumes, the first a description of the study and a summary of results, the second a series of appendices containing an explanation and sample of the calculations for each of the three segments of the broadcast industry; the appendices also include detailed tabular and graphic descriptions of various cost estimates at each of the 18 guidance levels at the three cost levels. Volume I begins with a preface, executive summary, and abstract, followed by an introduction in which a discussion of the purpose and scope of the study lead to an extensive graphic presentation of conclusions supported by summary tables. Following this is a background section outlining the purpose for and current efforts to regulate RF radiation, public and industry concerns over RF and

its regulation, a brief review of the electromagnetic environment and of health effects research, a profile of commercial broadcast facilities and a discussion of the framework for regulatory (economic) impact analyses.

The next section describes the method of approach used in the cost study. Following this is a section describing the compliance measure concepts developed by the EPA and consultants as part of this study. The remaining section describes the cost models--social, industry, and average firm. All assumptions, including costs, application of compliance measures and financial parameters, are discussed throughout and summarized at the conclusion of Volume I for convenience.

Volume II contains three appendices, one each for AM and FM radio, TV broadcast stations that present a step-by-step explanation of each of the calculations in the cost models. Those are followed by other appendices that present detailed estimates of the cost of compliance with 18 guidance levels at three cost levels, given in terms of the cost to society-at-large, the cost to industry, and the cost to the average broadcast firm; in addition, the number of stations requiring a compliance measure at each guidance level is given. The average annual cash flow cost and present value estimates are plotted for each of the three analyses (social, industry, and average firm) at three cost levels. These are supported by data in the tables, which also contain other cost analyses not plotted.

This two-volume report is one of a number of documents presenting research that was used to develop the proposed RF guidance and provide analyses for reviewers and decision makers considering it. A presentation of the engineering and health studies is contained in three reports published or in preparation by the U.S. Environmental Protection Agency. A review of over 5000 citations of health risk and biological effects of RF is given in U.S. Environmental Protection Agency, Biological Effects of Radiofrequency Radiation, J. A. Elder and D. F. Cahill Eds., Health Effects Research Laboratory, Research Triangle Park, North Carolina, EPA-600/8-83-026F, September 1984. A study of the engineering aspects of radiofrequency radiation is contained in Gailey, P. C. and R. A. Tell, An Engineering Assessment of the Potential Impact of Federal Radiation Protection Guidance on the AM, FM, and TV Broadcast Services, U.S. Environmental Protection Agency, Washington, D.C. (in press). A third report has been prepared on the radiofrequency environment: Hankin, N. N., The Radiofrequency Radiation Environment; Environmental Exposure Levels and RF-Emitting Sources, U.S. Environmental Protection Agency, Washington, D.C. (in press).

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Appendix G: Total Cost Estimates: FM, AM, TV G-1

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 13. 800 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	13.810	10.179	9.500	8.822	8.143	7.465	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	125.590	129.221	129.900	130.578	131.257	131.935	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	6.786	6.786	6.786	6.786	6.786	
(-) DEPRECIATION	0.	0.	6.786	9.953	9.500	9.500	9.500	
TAXABLE INCOME	139.400	136.900	129.221	126.733	127.864	128.542	129.221	
GROSS TAX	43.874	42.724	39.192	38.047	38.567	38.879	39.192	
INVESTMENT TAX CREDIT	0.	4.524	0.	0.	0.	0.	0.	
NET TAXES	43.874	38.200	39.192	38.047	38.567	38.879	39.192	
NET INCOME	95.526	87.390	90.029	91.853	92.011	92.377	92.744	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	13.810	10.179	9.500	8.822	8.143	7.465	57.919
TAX SAVINGS	0.	5.674	4.682	5.827	5.307	4.995	4.682	31.167
NET COMPLIANCE MEASURE COST	0.	8.136	5.497	3.673	3.515	3.149	2.782	26.752
AVERAGE ANNUAL NET COST		4.459						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 18.921	COHORT1 22.688	COHORT2 20.626	COHORT3 18.750	COHORT4 17.046	COHORT5 15.496	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 14. 900 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.220	3.348	3.125	2.902	2.678	2.455	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	134.180	136.052	136.275	136.498	136.722	136.945	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.232	2.232	2.232	2.232	2.232	
(-) DEPRECIATION	0.	0.	2.232	3.274	3.125	3.125	3.125	
TAXABLE INCOME	139.400	137.900	136.052	135.234	135.606	135.829	136.052	
GROSS TAX	43.874	43.184	42.334	41.957	42.129	42.231	42.334	
INVESTMENT TAX CREDIT	0.	1.488	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.696	42.334	41.957	42.129	42.231	42.334	
NET INCOME	95.526	92.484	93.718	94.318	94.370	94.490	94.611	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	5.220	3.348	3.125	2.902	2.678	2.455	19.728
TAX SAVINGS	0.	2.178	1.540	1.917	1.745	1.643	1.540	10.563
NET COMPLIANCE MEASURE COST	0.	3.042	1.808	1.208	1.156	1.036	0.915	9.165
AVERAGE ANNUAL NET COST		1.528						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 6.529	COHORT1 7.828	COHORT2 7.117	COHORT3 6.470	COHORT4 5.882	COHORT5 5.347	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 14. 900 MICROWATT PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	10.307	7.476	6.978	6.479	5.981	5.482	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	129.093	131.924	132.422	132.921	133.419	133.918	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	4.984	4.984	4.984	4.984	4.984	
(-) DEPRECIATION	0.	0.	4.984	7.310	6.978	6.978	6.978	
TAXABLE INCOME	139.400	137.400	131.924	130.096	130.927	131.425	131.924	
GROSS TAX	43.874	42.954	40.435	39.594	39.976	40.206	40.435	
INVESTMENT TAX CREDIT	0.	3.323	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.631	40.435	39.594	39.976	10.206	40.435	
NET INCOME	95.526	89.462	91.489	92.828	92.944	93.213	93.483	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	10.307	7.476	6.978	6.479	5.981	5.482	42.703
TAX SAVINGS	0.	4.243	3.439	4.280	3.898	3.668	3.439	22.966
NET COMPLIANCE MEASURE COST	0.	6.064	4.037	2.698	2.582	2.313	2.043	19.737
AVERAGE ANNUAL NET COST		3.290						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 13.971	COHORT1 16.752	COHORT2 15.229	COHORT3 13.845	COHORT4 12.586	COHORT5 11.442	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 14. 900 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	13.713	10.091	9.419	8.746	8.073	7.400	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	125.687	129.309	129.981	130.654	131.327	132.000	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	6.728	6.728	6.728	6.728	6.728	
(-) DEPRECIATION	0.	0.	6.728	9.867	9.419	9.419	9.419	
TAXABLE INCOME	139.400	136.900	129.309	126.842	127.963	128.636	129.309	
GROSS TAX	43.874	42.724	39.232	38.097	38.613	38.922	39.232	
INVESTMENT TAX CREDIT	0.	4.485	0.	0.	0.	0.	0.	
NET TAXES	43.874	38.239	39.232	38.097	38.613	38.922	39.232	
NET INCOME	95.526	87.448	90.077	91.884	92.041	92.404	92.768	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	13.713	10.091	9.419	8.746	8.073	7.400	57.442
TAX SAVINGS	0.	5.635	4.642	5.777	5.261	4.952	4.642	30.908
NET COMPLIANCE MEASURE COST	0.	8.078	5.449	3.642	3.485	3.122	2.758	26.534
AVERAGE ANNUAL NET COST		4.422						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 18.768	COHORT1 22.504	COHORT2 20.459	COHORT3 18.599	COHORT4 16.908	COHORT5 15.371	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 15. 1000 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.112	3.251	3.034	2.818	2.601	2.384	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	134.288	136.149	136.366	136.582	136.799	137.016	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.167	2.167	2.167	2.167	2.167	
(-) DEPRECIATION	0.	0.	2.167	3.179	3.034	3.034	3.034	
TAXABLE INCOME	139.400	137.900	136.149	135.354	135.715	135.932	136.149	
GROSS TAX	43.874	43.184	42.378	42.013	42.179	42.279	42.378	
INVESTMENT TAX CREDIT	0.	1.445	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.739	42.378	42.013	42.179	42.279	42.378	
NET INCOME	95.526	92.549	93.770	94.353	94.403	94.520	94.637	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	5.112	3.251	3.034	2.818	2.601	2.384	19.201
TAX SAVINGS	0.	2.135	1.496	1.861	1.695	1.595	1.496	10.278
NET COMPLIANCE MEASURE COST	0.	2.977	1.756	1.173	1.123	1.006	0.889	8.924
AVERAGE ANNUAL NET COST		1.487						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 6.359	COHORT1 7.626	COHORT2 6.932	COHORT3 6.302	COHORT4 5.729	COHORT5 5.208	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 15. 1000 MICROWATT PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	10.076	7.268	6.784	6.299	5.814	5.330	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	129.324	132.132	132.616	133.101	133.586	134.070	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	4.845	4.845	4.845	4.845	4.845	
(-) DEPRECIATION	0.	0.	4.845	7.107	6.784	6.784	6.784	
TAXABLE INCOME	139.400	137.400	132.132	130.355	131.163	131.647	132.132	
GROSS TAX	43.874	42.954	40.531	39.713	40.085	40.308	40.531	
INVESTMENT TAX CREDIT	0.	3.230	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.724	40.531	39.713	40.085	40.308	40.531	
NET INCOME	95.526	89.601	91.601	92.903	93.016	93.278	93.539	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	10.076	7.268	6.784	6.299	5.814	5.330	41.570
TAX SAVINGS	0.	4.150	3.343	4.161	3.789	3.566	3.343	22.353
NET COMPLIANCE MEASURE COST	0.	5.925	3.925	2.623	2.510	2.248	1.987	19.218
AVERAGE ANNUAL NET COST		3.203						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 13.607	COHORT1 16.316	COHORT2 14.833	COHORT3 13.484	COHORT4 12.258	COHORT5 11.144	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 15. 1000 MICROWATT PER SQ. CM HIGH COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	13.391	9.802	9.148	8.495	7.842	7.188	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	126.009	129.598	130.252	130.905	131.558	132.212	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	6.535	6.535	6.535	6.535	6.535	
(-) DEPRECIATION	0.	0.	6.535	9.584	9.148	9.148	9.148	
TAXABLE INCOME	139.400	136.900	129.598	127.202	128.291	128.945	129.598	
GROSS TAX	43.874	42.724	39.365	38.263	38.764	39.065	39.365	
INVESTMENT TAX CREDIT	0.	4.356	0.	0.	0.	0.	0.	
NET TAXES	43.874	38.368	39.365	38.263	38.764	39.065	39.365	
NET INCOME	95.526	87.641	90.233	91.989	92.141	92.494	92.847	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	13.391	9.802	9.148	8.495	7.842	7.188	55.866
TAX SAVINGS	0.	5.506	4.509	5.611	5.110	4.809	4.509	30.055
NET COMPLIANCE MEASURE COST	0.	7.885	5.293	3.537	3.385	3.032	2.679	25.811
AVERAGE ANNUAL NET COST		4.302						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 18.262	COHORT1 21.898	COHORT2 19.907	COHORT3 18.097	COHORT4 16.452	COHORT5 14.956	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 16. 2000 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	4.747	2.923	2.728	2.533	2.338	2.143	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	134.653	136.477	136.672	136.867	137.062	137.257	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	1.948	1.948	1.948	1.948	1.948	
(-) DEPRECIATION	0.	0.	1.948	2.858	2.728	2.728	2.728	
TAXABLE INCOME	139.400	137.900	136.477	135.763	136.088	136.283	136.477	
GROSS TAX	43.874	43.184	42.530	42.201	42.350	42.440	42.530	
INVESTMENT TAX CREDIT	0.	1.299	0.	0.	0.	0.	0.	
NET TAXES	43.874	41.885	42.530	42.201	42.350	42.440	42.530	
NET INCOME	95.526	92.768	93.948	94.471	94.517	94.622	94.727	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	4.747	2.923	2.728	2.533	2.338	2.143	17.412
TAX SAVINGS	0.	1.989	1.344	1.673	1.524	1.434	1.344	9.308
NET COMPLIANCE MEASURE COST	0.	2.758	1.578	1.055	1.009	0.904	0.799	8.103
AVERAGE ANNUAL NET COST		1.351						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 5.785	COHORT1 6.937	COHORT2 6.306	COHORT3 5.733	COHORT4 5.212	COHORT5 4.738	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 16. 2000 MICROWATT PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	9.240	6.516	6.082	5.647	5.213	4.779	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	130.160	132.884	133.318	133.753	134.187	134.621	
TAX PURPOSE ADJUSTMENT TO								
(+) AMORTIZATION	0.	0.	4.344	4.344	4.344	4.344	4.344	
(-) DEPRECIATION	0.	0.	4.344	6.371	6.082	6.082	6.082	
TAXABLE INCOME	139.400	137.400	132.884	131.291	132.015	132.449	132.884	
GROSS TAX	43.874	42.954	40.877	40.144	40.477	40.677	40.877	
INVESTMENT TAX CREDIT	0.	2.896	0.	0.	0.	0.	0.	
NET TAXES	43.874	40.058	40.877	40.144	40.477	40.677	40.877	
NET INCOME	95.526	90.102	92.007	93.174	93.276	93.510	93.745	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	9.240	6.516	6.082	5.647	5.213	4.779	37.477
TAX SAVINGS	0.	3.816	2.997	3.730	3.397	3.197	2.997	20.135
NET COMPLIANCE MEASURE COST	0.	5.424	3.519	2.352	2.250	2.016	1.781	17.341
AVERAGE ANNUAL NET COST		2.890						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 12.293	COHORT1 14.740	COHORT2 13.400	COHORT3 12.182	COHORT4 11.074	COHORT5 10.067	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 16. 2000 MICROWATT PER SQ. CM HIGH COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	12.275	8.798	8.211	7.625	7.038	6.452	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	127.125	130.602	131.189	131.775	132.362	132.948	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	5.865	5.865	5.865	5.865	5.865	
(-) DEPRECIATION	0.	0.	5.865	8.602	8.211	8.211	8.211	
TAXABLE INCOME	139.400	136.900	130.602	128.452	129.429	130.016	130.602	
GROSS TAX	43.874	42.724	39.827	38.838	39.287	39.557	39.827	
INVESTMENT TAX CREDIT	0.	3.910	0.	0.	0.	0.	0.	
NET TAXES	43.874	38.814	39.827	38.838	39.287	39.557	39.827	
NET INCOME	95.526	88.311	90.775	92.351	92.488	92.805	93.121	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	12.275	8.798	8.211	7.625	7.038	6.452	50.398
TAX SAVINGS	0.	5.060	4.047	5.036	4.587	4.317	4.047	27.093
NET COMPLIANCE MEASURE COST	0.	7.215	4.751	3.175	3.038	2.721	2.405	23.305
AVERAGE ANNUAL NET COST		3.884						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 16.506	COHORT1 19.792	COHORT2 17.993	COHORT3 16.357	COHORT4 14.870	COHORT5 13.518	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 17. 5000 MICROWATT PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	4.226	2.453	2.290	2.126	1.963	1.799	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	135.174	136.947	137.110	137.274	137.437	137.601	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	1.636	1.636	1.636	1.636	1.636	
(-) DEPRECIATION	0.	0.	1.636	2.399	2.290	2.290	2.290	
TAXABLE INCOME	139.400	137.900	136.947	136.347	136.619	136.783	136.947	
GROSS TAX	43.874	43.184	42.745	42.470	42.595	42.670	42.745	
INVESTMENT TAX CREDIT	0.	1.090	0.	0.	0.	0.	0.	
NET TAXES	43.874	42.094	42.745	42.470	42.595	42.670	42.745	
NET INCOME	95.526	93.080	94.201	94.641	94.679	94.767	94.855	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	4.226	2.453	2.290	2.126	1.963	1.799	14.858
TAX SAVINGS	0.	1.780	1.129	1.404	1.279	1.204	1.129	7.925
NET COMPLIANCE MEASURE COST	0.	2.446	1.325	0.885	0.847	0.759	0.671	6.933
AVERAGE ANNUAL NET COST		1.155						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 4.965	COHORT1 5.953	COHORT2 5.412	COHORT3 4.920	COHORT4 4.473	COHORT5 4.066	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 17. 5000 MICROWATT PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	8.049	5.444	5.081	4.718	4.355	3.992	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	131.351	133.956	134.319	134.682	135.045	135.408	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	3.629	3.629	3.629	3.629	3.629	
(-) DEPRECIATION	0.	0.	3.629	5.323	5.081	5.081	5.081	
TAXABLE INCOME	139.400	137.400	133.956	132.625	133.230	133.593	133.956	
GROSS TAX	43.874	42.954	41.370	40.758	41.036	41.203	41.370	
INVESTMENT TAX CREDIT	0.	2.420	0.	0.	0.	0.	0.	
NET TAXES	43.874	40.534	41.370	40.758	41.036	41.203	41.370	
NET INCOME	95.526	90.817	92.586	93.561	93.646	93.842	94.038	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	8.049	5.444	5.081	4.718	4.355	3.992	31.640
TAX SAVINGS	0.	3.340	2.504	3.116	2.838	2.671	2.504	16.974
NET COMPLIANCE MEASURE COST	0.	4.709	2.940	1.965	1.880	1.684	1.488	14.666
AVERAGE ANNUAL NET COST		2.444						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 10.418	COHORT1 12.492	COHORT2 11.357	COHORT3 10.324	COHORT4 9.386	COHORT5 8.532	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 17. 5000 MICROWATT PER SQ. CM

HIGH COST

TIME PERIOD

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	10.689	7.370	6.878	6.387	5.896	5.404	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	128.711	132.030	132.522	133.013	133.504	133.996	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	4.913	4.913	4.913	4.913	4.913	
(-) DEPRECIATION	0.	0.	4.913	7.206	6.878	6.878	6.878	
TAXABLE INCOME	139.400	136.900	132.030	130.229	131.048	131.539	132.030	
GROSS TAX	43.874	42.724	40.484	39.655	40.032	40.258	40.484	
INVESTMENT TAX CREDIT	0.	3.275	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.449	40.484	39.655	40.032	40.258	40.484	
NET INCOME	95.526	89.263	91.546	92.866	92.981	93.246	93.512	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	10.689	7.370	6.878	6.387	5.896	5.404	42.624
TAX SAVINGS	0.	4.425	3.390	4.219	3.842	3.616	3.390	22.883
NET COMPLIANCE MEASURE COST	0.	6.263	3.980	2.660	2.545	2.280	2.014	19.742
AVERAGE ANNUAL NET COST		3.290						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 14.010	COHORT1 16.799	COHORT2 15.272	COHORT3 13.883	COHORT4 12.621	COHORT5 11.474	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 18. 10000 MICROWATT PER SQ. CM — LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	4.142	2.377	2.219	2.061	1.902	1.743	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	135.258	137.023	137.181	137.340	137.498	137.657	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	1.585	1.585	1.585	1.585	1.585	
(-) DEPRECIATION	0.	0.	1.585	2.325	2.219	2.219	2.219	
TAXABLE INCOME	139.400	137.900	137.023	136.441	136.706	136.864	137.023	
GROSS TAX	43.874	43.184	42.780	42.513	42.635	42.707	42.780	
INVESTMENT TAX CREDIT	0.	1.057	0.	0.	0.	0.	0.	
NET TAXES	43.874	42.127	42.780	42.513	42.635	42.707	42.780	
NET INCOME	95.526	93.131	94.242	94.668	94.705	94.791	94.876	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	4.142	2.377	2.219	2.061	1.902	1.743	14.444
TAX SAVINGS	0.	1.747	1.094	1.361	1.239	1.167	1.094	7.701
NET COMPLIANCE MEASURE COST	0.	2.395	1.284	0.858	0.821	0.735	0.650	6.743
AVERAGE ANNUAL NET COST		1.124						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 4.832	COHORT1 5.794	COHORT2 5.267	COHORT3 4.788	COHORT4 4.353	COHORT5 3.957	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 18. 10000 MICROWATT PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	7.767	5.190	4.844	4.498	4.152	3.806	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	131.633	134.210	134.556	134.902	135.248	135.594	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	3.460	3.460	3.460	3.460	3.460	
(-) DEPRECIATION	0.	0.	3.460	5.075	4.844	4.844	4.844	
TAXABLE INCOME	139.400	137.400	134.210	132.941	133.518	133.864	134.210	
GROSS TAX	43.874	42.954	41.487	40.903	41.168	41.327	41.487	
INVESTMENT TAX CREDIT	0.	2.307	0.	0.	0.	0.	0.	
NET TAXES	43.874	40.647	41.487	40.903	41.168	41.327	41.487	
NET INCOME	95.526	90.986	92.723	93.653	93.734	93.921	94.107	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	7.767	5.190	4.844	4.498	4.152	3.806	30.257
TAX SAVINGS	0.	3.227	2.387	2.971	2.706	2.547	2.387	16.225
NET COMPLIANCE MEASURE COST	0.	4.540	2.803	1.873	1.792	1.605	1.419	14.032
AVERAGE ANNUAL NET COST		2.339						
PRESFNT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 9.974	COHORT1 11.960	COHORT2 10.872	COHORT3 9.884	COHORT4 8.986	COHORT5 8.169	

TABLE D-3. (CONTINUED)

GUIDANCE LEVEL 18. 10000 MICROWATT PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	139.400	139.400	139.400	139.400	139.400	139.400	139.400	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	10.340	7.056	6.585	6.115	5.644	5.174	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	139.400	129.060	132.344	132.815	133.285	133.756	134.226	
TAX PURPOSE ADJUSTMENT TO								
(+) AMORTIZATION	0.	0.	4.704	4.704	4.704	4.704	4.704	
(-) DEPRECIATION	0.	0.	4.704	6.899	6.585	6.585	6.585	
TAXABLE INCOME	139.400	136.900	132.344	130.620	131.404	131.874	132.344	
GROSS TAX	43.874	42.724	40.628	39.835	40.196	40.412	40.628	
INVESTMENT TAX CREDIT	0.	3.136	0.	0.	0.	0.	0.	
NET TAXES	43.874	39.588	40.628	39.835	40.196	40.412	40.628	
NET INCOME	95.526	89.472	91.716	92.980	93.089	93.343	93.597	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	10.340	7.056	6.585	6.115	5.644	5.174	40.914
TAX SAVINGS	0.	4.286	3.246	4.039	3.678	3.462	3.246	21.956
NET COMPLIANCE MEASURE COST	0.	6.054	3.810	2.546	2.437	2.183	1.929	18.958
AVERAGE ANNUAL NET COST		3.160						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 13.461	COHORT1 16.141	COHORT2 14.673	COHORT3 13.339	COHORT4 12.127	COHORT5 11.024	

Table D-4. THE NUMBER OF FM STATIONS REQUIRING MEASURES TO COMPLY WITH GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT STATIONS SELECT ONE OF FIVE COMPLIANCE MEASURES (2 THROUGH 6).

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
1. 1 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	637	1592	129	776	129	3263	
	MFMT	0	14	120	32	192	32	390	3653
MEDIUM COST ANALYSIS	SFMT	0	637	1592	258	517	258	3262	
	MFMT	0	14	120	64	128	64	390	3652
HIGH COST ANALYSIS	SFMT	0	637	1592	388	258	388	3263	
	MFMT	0	14	120	96	64	96	390	3653
2. 10 MICROWATT PER SQ. CM***									
LOW COST ANALYSIS	SFMT	0	1052	1519	25	153	25	2774	
	MFMT	0	59	140	15	91	15	320	3094
MEDIUM COST ANALYSIS	SFMT	0	1052	1519	51	102	51	2775	
	MFMT	0	59	140	30	61	30	320	3095
HIGH COST ANALYSIS	SFMT	0	1052	1519	76	51	76	2774	
	MFMT	0	59	140	45	30	45	319	3093
3. 20 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	1021	1028	12	76	12	2149	
	MFMT	0	65	115	12	75	12	279	2428
MEDIUM COST ANALYSIS	SFMT	0	1021	1028	25	51	25	2150	
	MFMT	0	65	115	25	50	25	280	2430
HIGH COST ANALYSIS	SFMT	0	1021	1028	38	25	38	2150	
	MFMT	0	65	115	37	25	37	279	2429

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER
**FACTORS ASSIGNING STATIONS AMONG FIXES 4,5 AND 6 CREATE ROUNDING ERRORS.
***THE NUMBER OF STATIONS REQUIRING FIX 2 INCREASES AT GUIDANCE LEVEL 2 BECAUSE GUIDANCE LEVEL 1 REQUIRES MORE STATIONS TO ADOPT MORE COMPLEX MITIGATION MEASURES.

Table D-4. (CONTINUED)

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
4. 50 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	818	500	4	26	4	1352	1577
	MFMT	0	83	86	7	42	7	225	
MEDIUM COST ANALYSIS	SFMT	0	818	500	8	17	8	1351	1576
	MFMT	0	83	86	14	28	14	225	
HIGH COST ANALYSIS	SFMT	0	818	500	13	8	13	1352	1577
	MFMT	0	83	86	21	14	21	225	
5. 75 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	733	345	3	18	3	1102	1292
	MFMT	0	62	86	5	32	5	190	
MEDIUM COST ANALYSIS	SFMT	0	733	345	6	12	6	1102	1291
	MFMT	0	62	86	10	21	10	189	
HIGH COST ANALYSIS	SFMT	0	733	345	9	6	9	1102	1292
	MFMT	0	62	86	16	10	16	190	
6. 100 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	686	286	1	10	1	984	1160
	MFMT	0	55	104	2	13	2	176	
MEDIUM COST ANALYSIS	SFMT	0	686	286	3	6	3	984	1159
	MFMT	0	55	104	4	8	4	175	
HIGH COST ANALYSIS	SFMT	0	686	286	5	3	5	985	1160
	MFMT	0	55	104	6	4	6	175	

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER
**FACTORS ASSIGNING STATIONS AMONG FIXES 4.5 AND 6 CREATE ROUNDING ERRORS.

Table D-4. (CONTINUED)

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
7. 200 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	460	166	0	1	0	627	
ANALYSIS	MFMT	0	43	77	0	5	0	125	752
MEDIUM COST	SFMT	0	460	166	0	1	0	627	
ANALYSIS	MFMT	0	43	77	1	3	1	125	752
HIGH COST	SFMT	0	460	166	0	0	0	626	
ANALYSIS	MFMT	0	43	77	2	1	2	125	751
8. 300 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	340	108	0	0	0	448	
ANALYSIS	MFMT	0	43	69	0	0	0	112	560
MEDIUM COST	SFMT	0	340	108	0	0	0	448	
ANALYSIS	MFMT	0	43	69	0	0	0	112	560
HIGH COST	SFMT	0	340	108	0	0	0	448	
ANALYSIS	MFMT	0	43	69	0	0	0	112	560
9. 400 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	233	80	0	0	0	313	
ANALYSIS	MFMT	0	42	58	0	0	0	100	413
MEDIUM COST	SFMT	0	233	80	0	0	0	313	
ANALYSIS	MFMT	0	42	58	0	0	0	100	413
HIGH COST	SFMT	0	233	80	0	0	0	313	
ANALYSIS	MFMT	0	42	58	0	0	0	100	413

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER
**FACTORS ASSIGNING STATIONS AMONG FIXES 4,5 AND 6 CREATE ROUNDING ERRORS.

Table D-4. (CONTINUED)

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
10. 500 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	188	64	0	0	0	252	345
	MFMT	0	43	50	0	0	0	93	
MEDIUM COST ANALYSIS	SFMT	0	188	64	0	0	0	252	345
	MFMT	0	43	50	0	0	0	93	
HIGH COST ANALYSIS	SFMT	0	188	64	0	0	0	252	345
	MFMT	0	43	50	0	0	0	93	
11. 600 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	162	48	0	0	0	210	291
	MFMT	0	39	42	0	0	0	81	
MEDIUM COST ANALYSIS	SFMT	0	162	48	0	0	0	210	291
	MFMT	0	39	42	0	0	0	81	
HIGH COST ANALYSIS	SFMT	0	162	48	0	0	0	210	291
	MFMT	0	39	42	0	0	0	81	
12. 700 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	134	42	0	0	0	176	245
	MFMT	0	38	31	0	0	0	69	
MEDIUM COST ANALYSIS	SFMT	0	134	42	0	0	0	176	245
	MFMT	0	38	31	0	0	0	69	
HIGH COST ANALYSIS	SFMT	0	134	42	0	0	0	176	245
	MFMT	0	38	31	0	0	0	69	

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER
**FACTORS ASSIGNING STATIONS AMONG FIXES 4,5 AND 6 CREATE ROUNDING ERRORS.

Table D-4. (CONTINUED)

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
13. 800 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	123	35	0	0	0	158	226
ANALYSIS	MFMT	0	39	29	0	0	0	68	
MEDIUM COST	SFMT	0	123	35	0	0	0	158	226
ANALYSIS	MFMT	0	39	29	0	0	0	68	
HIGH COST	SFMT	0	123	35	0	0	0	158	226
ANALYSIS	MFMT	0	39	29	0	0	0	68	
14. 900 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	107	31	0	0	0	138	201
ANALYSIS	MFMT	0	38	25	0	0	0	63	
MEDIUM COST	SFMT	0	107	31	0	0	0	138	201
ANALYSIS	MFMT	0	38	25	0	0	0	63	
HIGH COST	SFMT	0	107	31	0	0	0	138	201
ANALYSIS	MFMT	0	38	25	0	0	0	63	
15. 1000 MICROWATT PER SQ. CM									
LOW COST	SFMT	0	105	24	0	0	0	129	188
ANALYSIS	MFMT	0	39	20	0	0	0	59	
MEDIUM COST	SFMT	0	105	24	0	0	0	129	188
ANALYSIS	MFMT	0	39	20	0	0	0	59	
HIGH COST	SFMT	0	105	24	0	0	0	129	188
ANALYSIS	MFMT	0	39	20	0	0	0	59	

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER
**FACTORS ASSIGNING STATIONS AMONG FIXES 4,5 AND 6 CREATE ROUNDING ERRORS.

Table D-4. (CONTINUED)

GUIDANCE LEVEL		FIX1	FIX2	FIX3	FIX4	FIX5	FIX6	SUB-TOTAL*	TOTAL**
16. 2000 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	56	10	0	0	0	66	
	MFMT	0	22	6	0	0	0	28	94
MEDIUM COST ANALYSIS	SFMT	0	56	10	0	0	0	66	
	MFMT	0	22	6	0	0	0	28	94
HIGH COST ANALYSIS	SFMT	0	56	10	0	0	0	66	
	MFMT	0	22	6	0	0	0	28	94
17. 5000 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	16	0	0	0	0	16	
	MFMT	0	8	0	0	0	0	8	24
MEDIUM COST ANALYSIS	SFMT	0	16	0	0	0	0	16	
	MFMT	0	8	0	0	0	0	8	24
HIGH COST ANALYSIS	SFMT	0	16	0	0	0	0	16	
	MFMT	0	8	0	0	0	0	8	24
18. 10000 MICROWATT PER SQ. CM									
LOW COST ANALYSIS	SFMT	0	3	0	0	0	0	3	
	MFMT	0	0	0	0	0	0	0	3
MEDIUM COST ANALYSIS	SFMT	0	3	0	0	0	0	3	
	MFMT	0	0	0	0	0	0	0	3
HIGH COST ANALYSIS	SFMT	0	3	0	0	0	0	3	
	MFMT	0	0	0	0	0	0	0	3

*TOTAL NUMBER OF STATIONS REQUIRING A FIX AT THE SPECIFIED GUIDANCE LEVEL
SFMT=SINGLE FM TOWER, MFMT=MULTIPLE FM TOWER
**FACTORS ASSIGNING STATIONS AMONG FIXES 4,5 AND 6 CREATE ROUNDING ERRORS.

APPENDIX E

COST ESTIMATES FOR AM STATIONS

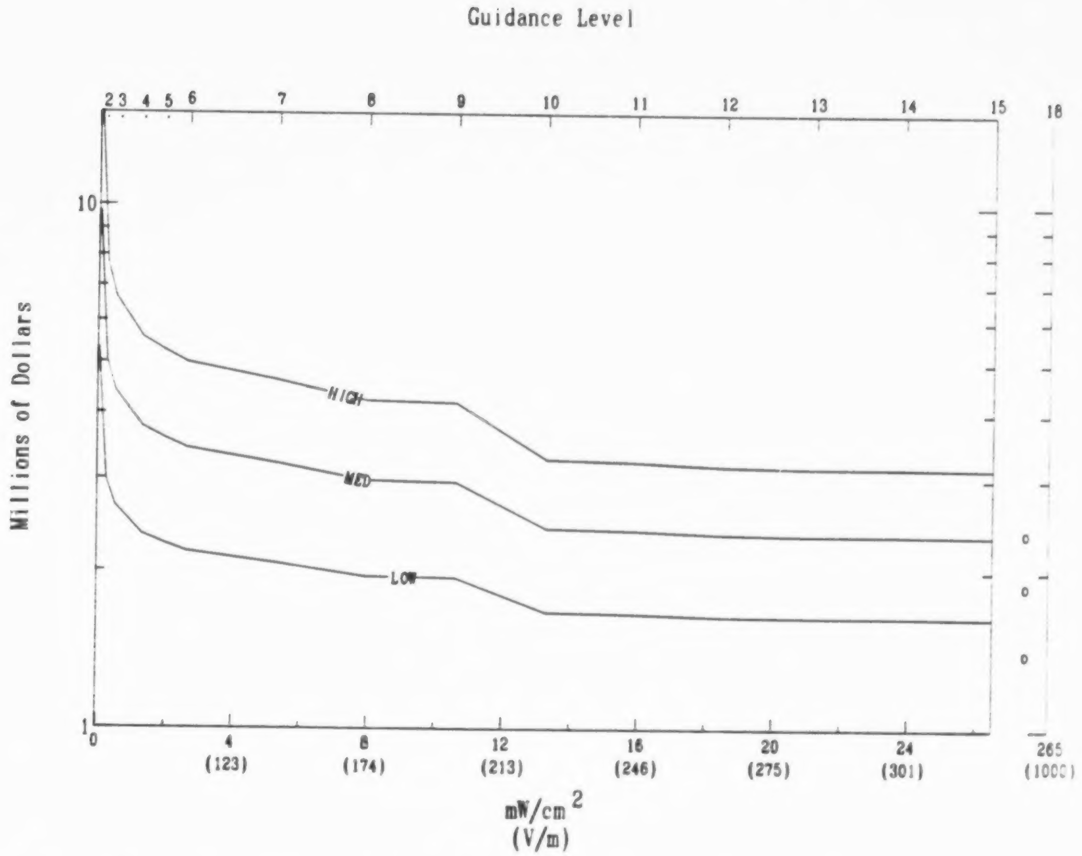

Figure E-1. The annual cash flow (current year dollar) cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from AM radio broadcast sources is shown for 18 specified guidance levels at three cost levels. It is assumed that compliance costs are spread evenly among five annual cohorts of stations.

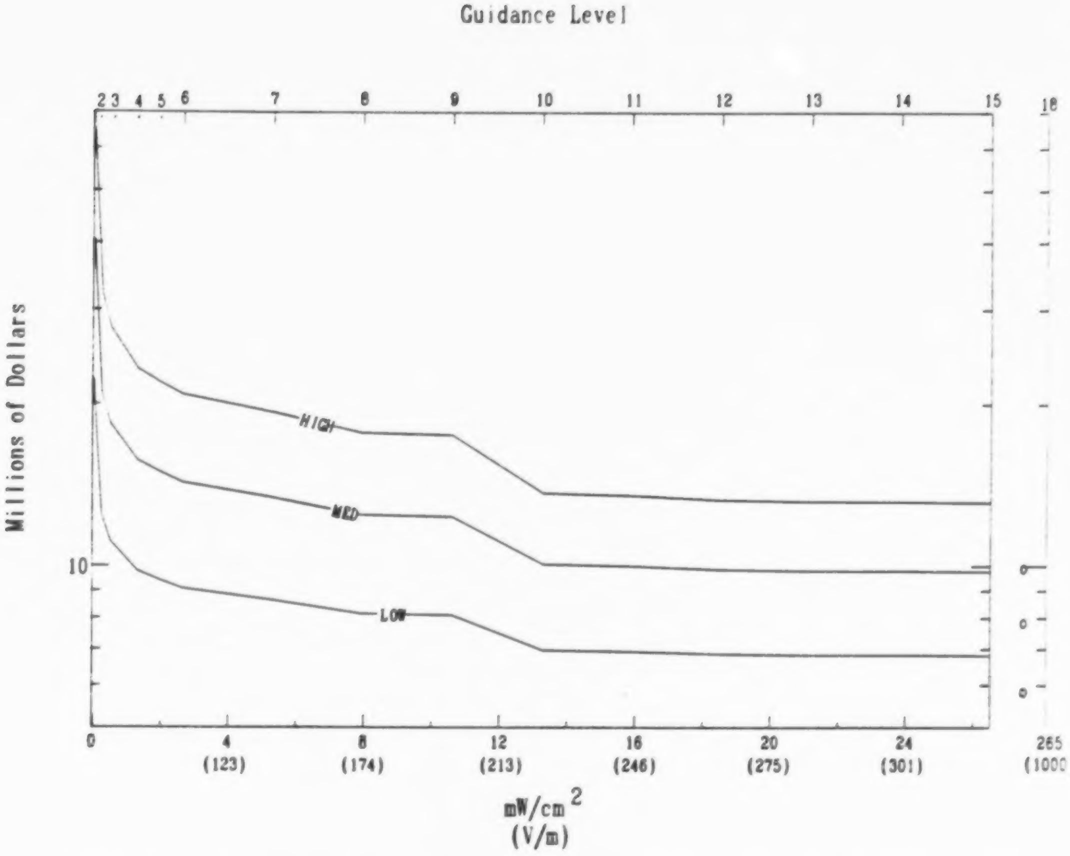

Figure E-2. The present (constant dollar) value of the cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from AM radio broadcast sources is shown for 18 specified guidance levels at three cost levels.

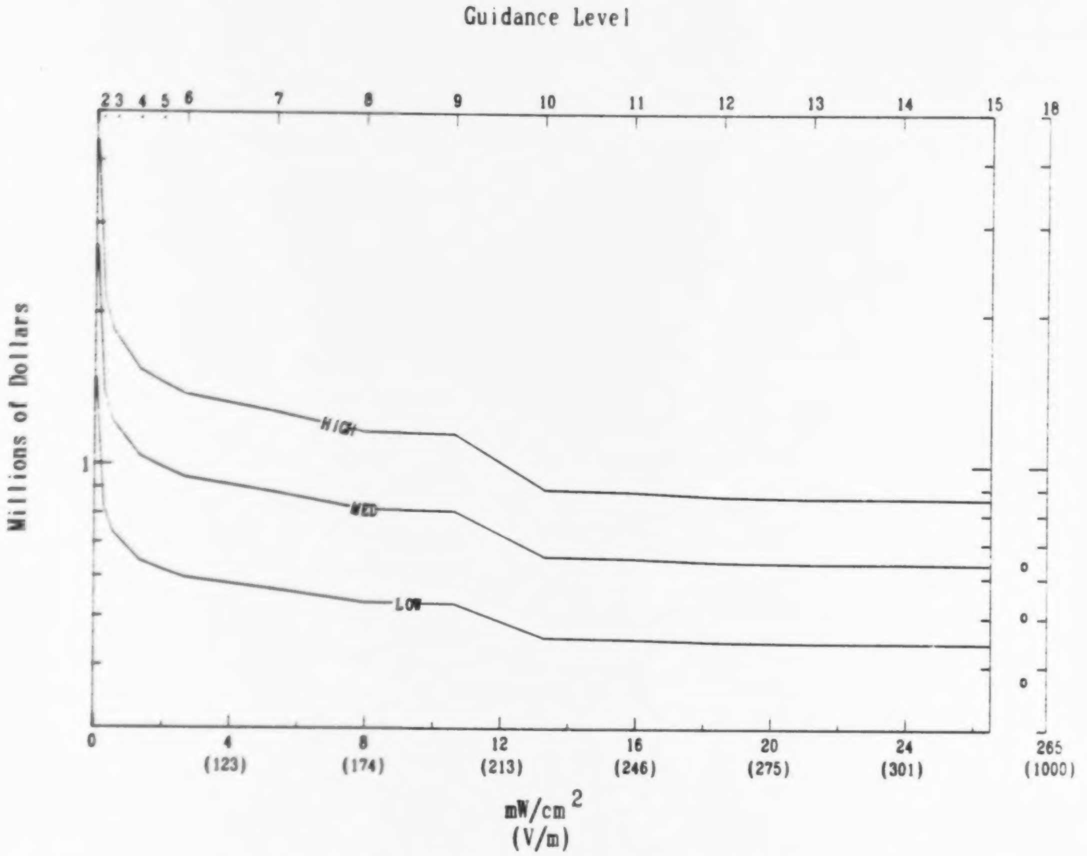

Figure E-3. The average net after-tax cash flow (current year dollar) cost to the AM radio broadcast industry of guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at three cost levels.

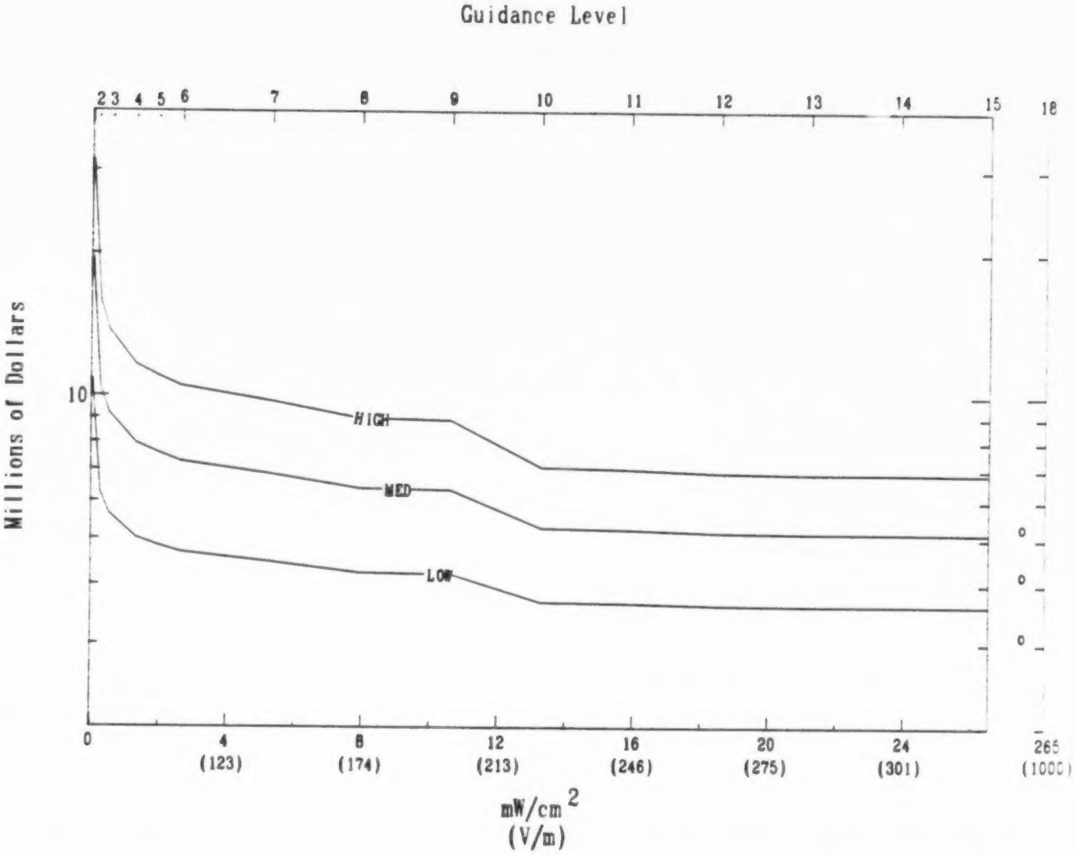

Figure E-4. The present (constant dollar) value of the net after-tax cost to the AM radio broadcast industry of guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at three cost levels.

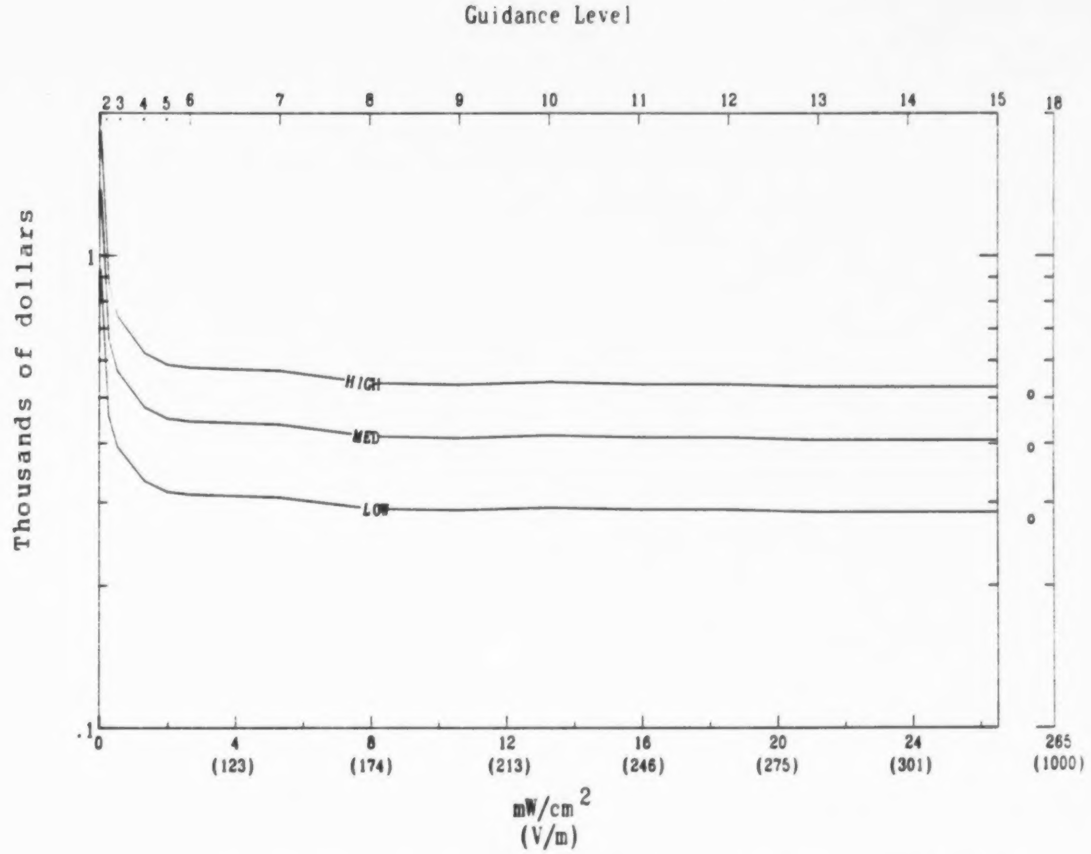

Figure E-5. The average annual net after-tax cash flow (current year dollar) cost of compliance for the average profitable AM radio broadcast station of guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at three cost levels.

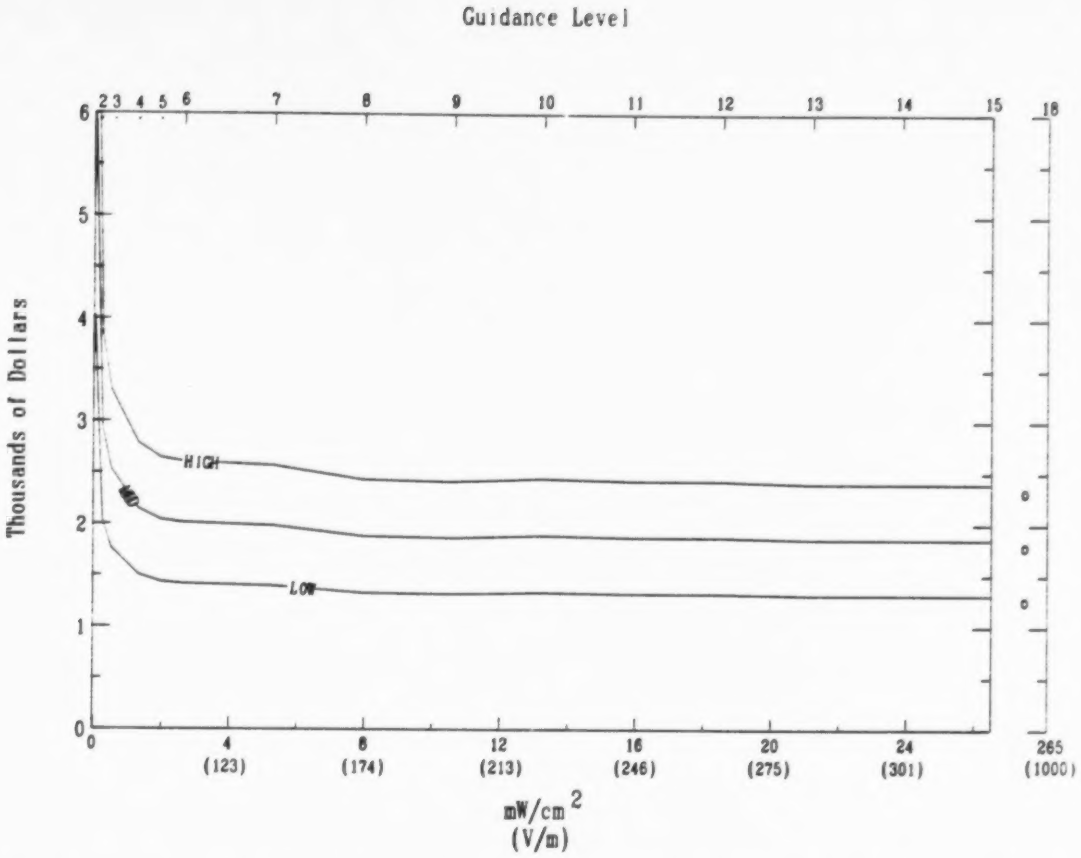

Figure E-6. The average (of 5 cohorts) present (constant dollar) value of the net after-tax cost of compliance for the average profitable AM radio broadcast station of guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at three cost levels.

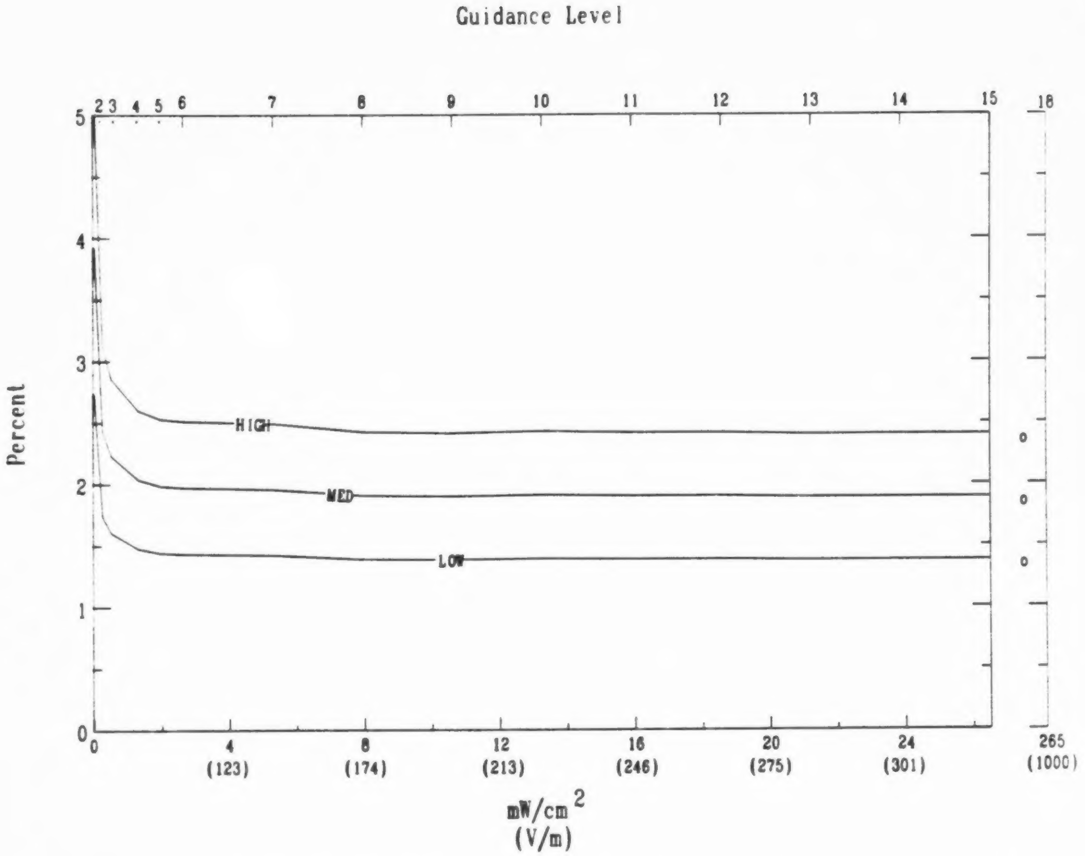

Figure E-7. The percentage reduction in the net profit of the average profitable AM radio broadcast station associated with the maximum annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 18 guidance levels at 3 cost levels.

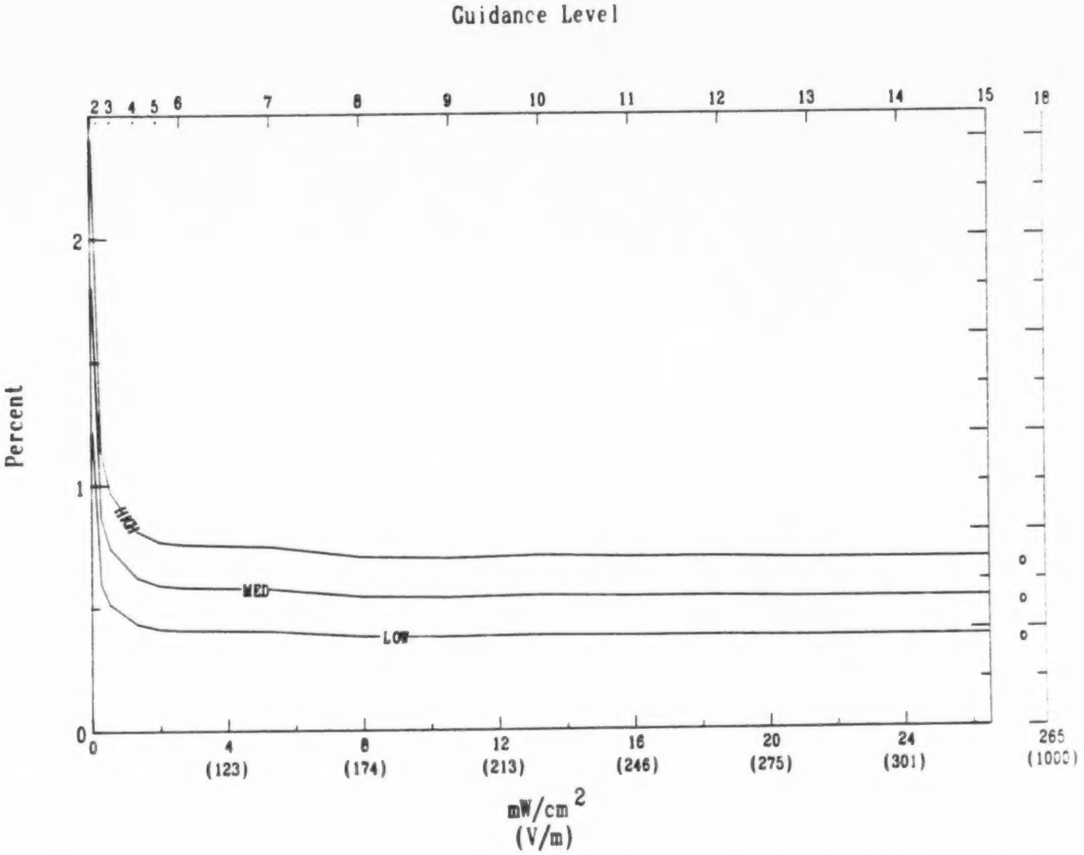

Figure E-8. The percentage reduction in the net profit of the average profitable AM radio broadcast station associated with the average annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 18 guidance levels at 3 cost levels.

TABLE E-1. AN ESTIMATE OF THE POTENTIAL COST TO THE SOCIETY-AT-LARGE OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM AM BROADCAST SOURCES IS GIVEN FOR 3 COST LEVELS. THE GROSS COST, ANNUAL CASH FLOW (CURRENT YEAR DOLLAR) COST AND THE PRESENT (CONSTANT DOLLAR) VALUE ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT COMPLIANCE COSTS (ANNUAL CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN MILLIONS OF DOLLARS.

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
1 10.00 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	19.680	39.356	66.912
TOTAL GROSS COST	26.613	48.600	78.467
ANNUAL CASH FLOW COST	5.323	9.720	15.693
PRESENT VALUE	22.195	40.531	65.439
2 31.62 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	8.004	16.006	27.213
TOTAL GROSS COST	14.937	25.250	38.768
ANNUAL CASH FLOW COST	2.987	5.050	7.754
PRESENT VALUE	12.457	21.058	32.332
3 44.67 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	6.391	12.780	21.728
TOTAL GROSS COST	13.324	22.024	33.283
ANNUAL CASH FLOW COST	2.665	4.405	6.657
PRESENT VALUE	11.112	18.367	27.757
4 70.79 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	4.805	9.608	16.335
TOTAL GROSS COST	11.738	18.852	27.890
ANNUAL CASH FLOW COST	2.348	3.770	5.578
PRESENT VALUE	9.789	15.722	23.260
5 86.60 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	4.344	8.686	14.768
TOTAL GROSS COST	11.277	17.930	26.323
ANNUAL CASH FLOW COST	2.255	3.586	5.265
PRESENT VALUE	9.404	14.954	21.953

TABLE E-1. (CONTINUED)

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
6 100.00 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	3.956	7.910	13.449
TOTAL GROSS COST	10.889	17.154	25.004
ANNUAL CASH FLOW COST	2.178	3.431	5.001
PRESENT VALUE	9.081	14.306	20.853
7 141.25 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	3.415	6.829	11.610
TOTAL GROSS COST	10.348	16.073	23.165
ANNUAL CASH FLOW COST	2.070	3.215	4.633
PRESENT VALUE	8.630	13.404	19.319
8 173.18 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	2.832	5.663	9.629
TOTAL GROSS COST	9.765	14.907	21.184
ANNUAL CASH FLOW COST	1.953	2.981	4.237
PRESENT VALUE	8.144	12.432	17.667
9 200.00 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	2.770	5.540	9.419
TOTAL GROSS COST	9.703	14.784	20.974
ANNUAL CASH FLOW COST	1.941	2.957	4.195
PRESENT VALUE	8.092	12.330	17.492
10 223.87 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	1.416	2.832	4.814
TOTAL GROSS COST	8.349	12.076	16.369
ANNUAL CASH FLOW COST	1.670	2.415	3.274
PRESENT VALUE	6.963	10.071	13.652

TABLE E-1. (CONTINUED)

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
11 244.91 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	1.369	2.738	4.655
TOTAL GROSS COST	8.302	11.982	16.210
ANNUAL CASH FLOW COST	1.660	2.396	3.242
PRESENT VALUE	6.924	9.993	13.519
12 264.55 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	1.278	2.556	4.346
TOTAL GROSS COST	8.211	11.800	15.901
ANNUAL CASH FLOW COST	1.642	2.360	3.180
PRESENT VALUE	6.848	9.841	13.261
13 281.84 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	1.249	2.497	4.246
TOTAL GROSS COST	8.182	11.741	15.801
ANNUAL CASH FLOW COST	1.636	2.348	3.160
PRESENT VALUE	6.823	9.792	13.177
14 300.00 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	1.247	2.494	4.240
TOTAL GROSS COST	8.180	11.738	15.795
ANNUAL CASH FLOW COST	1.636	2.348	3.159
PRESENT VALUE	6.822	9.789	13.173
15 316.23 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	1.229	2.457	4.177
TOTAL GROSS COST	8.162	11.701	15.732
ANNUAL CASH FLOW COST	1.632	2.340	3.146
PRESENT VALUE	6.806	9.758	13.120

TABLE E-1. (CONTINUED)

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
16 446.68 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	1.131	2.261	3.844
TOTAL GROSS COST	8.064	11.505	15.399
ANNUAL CASH FLOW COST	1.613	2.301	3.080
PRESENT VALUE	6.725	9.595	12.842
17 707.95 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	0.287	0.574	0.975
TOTAL GROSS COST	7.220	9.818	12.530
ANNUAL CASH FLOW COST	1.444	1.964	2.506
PRESENT VALUE	6.021	8.188	10.450
18 1000.00 VOLTS PER METER			
COMPLIANCE SURVEY COST	6.933	9.244	11.555
COMPLIANCE MEASURE COST	0.135	0.271	0.460
TOTAL GROSS COST	7.068	9.515	12.015
ANNUAL CASH FLOW COST	1.414	1.903	2.403
PRESENT VALUE	5.895	7.935	10.020

TABLE E-2. AN ESTIMATE OF THE POTENTIAL COST TO THE AM BROADCAST INDUSTRY OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 3 COST LEVELS. THE ANNUAL, AVERAGE AND TOTAL CASH FLOW (CURRENT YEAR DOLLAR) COST AND THE PRESENT (CONSTANT DOLLAR) VALUE OF THE NET AFTER TAX COST ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT COMPLIANCE COSTS (ANNUAL NET CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN MILLIONS OF DOLLARS.

GUIDANCE LEVEL 1. 10.00 VOLTS PER METER

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.339	0.478	0.320	0.306	0.274	0.242					
COHORT 2		1.339	0.478	0.320	0.306	0.274	0.242				
COHORT 3			1.339	0.478	0.320	0.306	0.274	0.242			
COHORT 4				1.339	0.478	0.320	0.306	0.274	0.242		
COHORT 5					1.339	0.478	0.320	0.306	0.274	0.242	
ANNUAL CASH FLOW											
PROJECTED	1.339	1.817	2.137	2.443	2.717	1.620	1.141	0.822	0.516	0.242	14.794
AVERAGE	1.479										
PRESENT VALUE	10.863										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	2.179	0.956	0.639	0.612	0.548	0.484					
COHORT 2		2.179	0.956	0.639	0.612	0.548	0.484				
COHORT 3			2.179	0.956	0.639	0.612	0.548	0.484			
COHORT 4				2.179	0.956	0.639	0.612	0.548	0.484		
COHORT 5					2.179	0.956	0.639	0.612	0.548	0.484	
ANNUAL CASH FLOW											
PROJECTED	2.179	3.135	3.775	4.386	4.934	3.239	2.283	1.644	1.032	0.484	27.090
AVERAGE	2.709										
PRESENT VALUE	19.644										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	3.255	1.626	1.087	1.040	0.931	0.823					
COHORT 2		3.255	1.626	1.087	1.040	0.931	0.823				
COHORT 3			3.255	1.626	1.087	1.040	0.931	0.823			
COHORT 4				3.255	1.626	1.087	1.040	0.931	0.823		
COHORT 5					3.255	1.626	1.087	1.040	0.931	0.823	
ANNUAL CASH FLOW											
PROJECTED	3.255	4.881	5.968	7.008	7.939	5.507	3.881	2.794	1.754	0.823	43.811
AVERAGE	4.381										
PRESENT VALUE	31.524										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 2. 31.62 VOLTS PER METER

LOW COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.989	0.194	0.130	0.124	0.111	0.098					
COHORT 2		0.989	0.194	0.130	0.124	0.111	0.098				
COHORT 3			0.989	0.194	0.130	0.124	0.111	0.098			
COHORT 4				0.989	0.194	0.130	0.124	0.111	0.098		
COHORT 5					0.989	0.194	0.130	0.124	0.111	0.098	
ANNUAL CASH FLOW											
PROJECTED	0.989	1.183	1.313	1.438	1.549	0.659	0.464	0.334	0.210	0.098	8.238
AVERAGE	0.824										
PRESENT VALUE	6.271										

MEDIUM COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.479	0.389	0.260	0.249	0.223	0.197					
COHORT 2		1.479	0.389	0.260	0.249	0.223	0.197				
COHORT 3			1.479	0.389	0.260	0.249	0.223	0.197			
COHORT 4				1.479	0.389	0.260	0.249	0.223	0.197		
COHORT 5					1.479	0.389	0.260	0.249	0.223	0.197	
ANNUAL CASH FLOW											
PROJECTED	1.479	1.867	2.127	2.376	2.599	1.317	0.928	0.668	0.420	0.197	13.979
AVERAGE	1.398										
PRESENT VALUE	10.459										

HIGH COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	2.064	0.661	0.442	0.423	0.379	0.335					
COHORT 2		2.064	0.661	0.442	0.423	0.379	0.335				
COHORT 3			2.064	0.661	0.442	0.423	0.379	0.335			
COHORT 4				2.064	0.661	0.442	0.423	0.379	0.335		
COHORT 5					2.064	0.661	0.442	0.423	0.379	0.335	
ANNUAL CASH FLOW											
PROJECTED	2.064	2.726	3.168	3.590	3.969	2.240	1.578	1.136	0.714	0.335	21.520
AVERAGE	2.152										
PRESENT VALUE	15.908										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 3. 44.67 VOLTS PER METER

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.940	0.155	0.104	0.099	0.089	0.079					
COHORT 2		0.940	0.155	0.104	0.099	0.089	0.079				
COHORT 3			0.940	0.155	0.104	0.099	0.089	0.079			
COHORT 4				0.940	0.155	0.104	0.099	0.089	0.079		
COHORT 5					0.940	0.155	0.104	0.099	0.089	0.079	
ANNUAL CASH FLOW											
PROJECTED	0.940	1.096	1.200	1.299	1.388	0.526	0.371	0.267	0.168	0.079	7.332
AVERAGE	0.733										
PRESENT VALUE	5.636										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.382	0.311	0.208	0.199	0.178	0.157					
COHORT 2		1.382	0.311	0.208	0.199	0.178	0.157				
COHORT 3			1.382	0.311	0.208	0.199	0.178	0.157			
COHORT 4				1.382	0.311	0.208	0.199	0.178	0.157		
COHORT 5					1.382	0.311	0.208	0.199	0.178	0.157	
ANNUAL CASH FLOW											
PROJECTED	1.382	1.692	1.900	2.098	2.276	1.052	0.741	0.534	0.335	0.157	12.168
AVERAGE	1.217										
PRESENT VALUE	9.190										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.900	0.528	0.353	0.338	0.302	0.267					
COHORT 2		1.900	0.528	0.353	0.338	0.302	0.267				
COHORT 3			1.900	0.528	0.353	0.338	0.302	0.267			
COHORT 4				1.900	0.528	0.353	0.338	0.302	0.267		
COHORT 5					1.900	0.528	0.353	0.338	0.302	0.267	
ANNUAL CASH FLOW											
PROJECTED	1.900	2.428	2.781	3.118	3.421	1.788	1.260	0.907	0.570	0.267	18.440
AVERAGE	1.844										
PRESENT VALUE	13.751										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 4. 70.79 VOLTS PER METER

LOW COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.893	0.117	0.078	0.075	0.067	0.059					
COHORT 2		0.893	0.117	0.078	0.075	0.067	0.059				
COHORT 3			0.893	0.117	0.078	0.075	0.067	0.059			
COHORT 4				0.893	0.117	0.078	0.075	0.067	0.059		
COHORT 5					0.893	0.117	0.078	0.075	0.067	0.059	
ANNUAL CASH FLOW											
PROJECTED	0.893	1.010	1.088	1.162	1.229	0.395	0.279	0.201	0.126	0.059	6.442
AVERAGE	0.644										
PRESENT VALUE	5.012										

MEDIUM COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.287	0.233	0.156	0.149	0.134	0.118					
COHORT 2		1.287	0.233	0.156	0.149	0.134	0.118				
COHORT 3			1.287	0.233	0.156	0.149	0.134	0.118			
COHORT 4				1.287	0.233	0.156	0.149	0.134	0.118		
COHORT 5					1.287	0.233	0.156	0.149	0.134	0.118	
ANNUAL CASH FLOW											
PROJECTED	1.287	1.520	1.676	1.825	1.959	0.791	0.557	0.401	0.252	0.118	10.387
AVERAGE	1.039										
PRESENT VALUE	7.942										

HIGH COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.738	0.397	0.265	0.254	0.227	0.201					
COHORT 2		1.738	0.397	0.265	0.254	0.227	0.201				
COHORT 3			1.738	0.397	0.265	0.254	0.227	0.201			
COHORT 4				1.738	0.397	0.265	0.254	0.227	0.201		
COHORT 5					1.738	0.397	0.265	0.254	0.227	0.201	
ANNUAL CASH FLOW											
PROJECTED	1.738	2.135	2.400	2.654	2.881	1.344	0.947	0.682	0.428	0.201	15.412
AVERAGE	1.541										
PRESENT VALUE	11.629										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 5. 86.60 VOLTS PER METER

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.879	0.106	0.071	0.068	0.060	0.053					
COHORT 2		0.879	0.106	0.071	0.068	0.060	0.053				
COHORT 3			0.879	0.106	0.071	0.068	0.060	0.053			
COHORT 4				0.879	0.106	0.071	0.068	0.060	0.053		
COHORT 5					0.879	0.106	0.071	0.068	0.060	0.053	
ANNUAL CASH FLOW PROJECTED	0.879	0.985	1.055	1.123	1.183	0.357	0.252	0.181	0.114	0.053	6.183
AVERAGE	0.618										
PRESENT VALUE	4.831										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.259	0.211	0.141	0.135	0.121	0.107					
COHORT 2		1.259	0.211	0.141	0.135	0.121	0.107				
COHORT 3			1.259	0.211	0.141	0.135	0.121	0.107			
COHORT 4				1.259	0.211	0.141	0.135	0.121	0.107		
COHORT 5					1.259	0.211	0.141	0.135	0.121	0.107	
ANNUAL CASH FLOW PROJECTED	1.259	1.470	1.611	1.746	1.867	0.715	0.504	0.363	0.228	0.107	9.869
AVERAGE	0.987										
PRESENT VALUE	7.580										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.691	0.359	0.240	0.230	0.206	0.182					
COHORT 2		1.691	0.359	0.240	0.230	0.206	0.182				
COHORT 3			1.691	0.359	0.240	0.230	0.206	0.182			
COHORT 4				1.691	0.359	0.240	0.230	0.206	0.182		
COHORT 5					1.691	0.359	0.240	0.230	0.206	0.182	
ANNUAL CASH FLOW PROJECTED	1.691	2.050	2.290	2.519	2.725	1.215	0.857	0.617	0.387	0.182	14.532
AVERAGE	1.453										
PRESENT VALUE	11.013										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 6. 100.00 VOLTS PER METER

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.867	0.096	0.064	0.061	0.055	0.049					
COHORT 2		0.867	0.096	0.064	0.061	0.055	0.049				
COHORT 3			0.867	0.096	0.064	0.061	0.055	0.049			
COHORT 4				0.867	0.096	0.064	0.061	0.055	0.049		
COHORT 5					0.867	0.096	0.064	0.061	0.055	0.049	
ANNUAL CASH FLOW PROJECTED	0.867	0.964	1.028	1.089	1.144	0.326	0.229	0.165	0.104	0.049	5.965
AVERAGE	0.596										
PRESENT VALUE	4.678										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.236	0.192	0.128	0.123	0.110	0.097					
COHORT 2		1.236	0.192	0.128	0.123	0.110	0.097				
COHORT 3			1.236	0.192	0.128	0.123	0.110	0.097			
COHORT 4				1.236	0.192	0.128	0.123	0.110	0.097		
COHORT 5					1.236	0.192	0.128	0.123	0.110	0.097	
ANNUAL CASH FLOW PROJECTED	1.236	1.428	1.556	1.679	1.789	0.651	0.459	0.330	0.207	0.097	9.434
AVERAGE	0.943										
PRESENT VALUE	7.275										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.651	0.327	0.218	0.209	0.187	0.165					
COHORT 2		1.651	0.327	0.218	0.209	0.187	0.165				
COHORT 3			1.651	0.327	0.218	0.209	0.187	0.165			
COHORT 4				1.651	0.327	0.218	0.209	0.187	0.165		
COHORT 5					1.651	0.327	0.218	0.209	0.187	0.165	
ANNUAL CASH FLOW PROJECTED	1.651	1.978	2.197	2.406	2.593	1.107	0.780	0.562	0.353	0.165	13.791
AVERAGE	1.379										
PRESENT VALUE	10.494										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 7. 141.25 VOLTS PER METER

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.851	0.083	0.055	0.053	0.048	0.042					
COHORT 2		0.851	0.083	0.055	0.053	0.048	0.042				
COHORT 3			0.851	0.083	0.055	0.053	0.048	0.042			
COHORT 4				0.851	0.083	0.055	0.053	0.048	0.042		
COHORT 5					0.851	0.083	0.055	0.053	0.048	0.042	
ANNUAL CASH FLOW											
PROJECTED	0.851	0.934	0.990	1.043	1.090	0.281	0.198	0.143	0.090	0.042	5.661
AVERAGE	0.566										
PRESENT VALUE	4.465										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.203	0.166	0.111	0.106	0.095	0.084					
COHORT 2		1.203	0.166	0.111	0.106	0.095	0.084				
COHORT 3			1.203	0.166	0.111	0.106	0.095	0.084			
COHORT 4				1.203	0.166	0.111	0.106	0.095	0.084		
COHORT 5					1.203	0.166	0.111	0.106	0.095	0.084	
ANNUAL CASH FLOW											
PROJECTED	1.203	1.369	1.480	1.586	1.681	0.562	0.396	0.285	0.179	0.084	8.826
AVERAGE	0.883										
PRESENT VALUE	6.849										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.596	0.282	0.189	0.180	0.162	0.143					
COHORT 2		1.596	0.282	0.189	0.180	0.162	0.143				
COHORT 3			1.596	0.282	0.189	0.180	0.162	0.143			
COHORT 4				1.596	0.282	0.189	0.180	0.162	0.143		
COHORT 5					1.596	0.282	0.189	0.180	0.162	0.143	
ANNUAL CASH FLOW											
PROJECTED	1.596	1.878	2.067	2.247	2.409	0.956	0.673	0.485	0.304	0.143	12.759
AVERAGE	1.276										
PRESENT VALUE	9.771										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 8. 173.18 VOLTS PER METER

LOW COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.834	0.069	0.046	0.044	0.039	0.035					
COHORT 2		0.834	0.069	0.046	0.044	0.039	0.035				
COHORT 3			0.834	0.069	0.046	0.044	0.039	0.035			
COHORT 4				0.834	0.069	0.046	0.044	0.039	0.035		
COHORT 5					0.834	0.069	0.046	0.044	0.039	0.035	
ANNUAL CASH FLOW											
PROJECTED	0.834	0.903	0.949	0.993	1.032	0.233	0.164	0.118	0.074	0.035	5.334
AVERAGE	0.533										
PRESENT VALUE	4.236										

MEDIUM COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.168	0.138	0.092	0.088	0.079	0.070					
COHORT 2		1.168	0.138	0.092	0.088	0.079	0.070				
COHORT 3			1.168	0.138	0.092	0.088	0.079	0.070			
COHORT 4				1.168	0.138	0.092	0.088	0.079	0.070		
COHORT 5					1.168	0.138	0.092	0.088	0.079	0.070	
ANNUAL CASH FLOW											
PROJECTED	1.168	1.306	1.398	1.486	1.565	0.466	0.328	0.236	0.148	0.070	8.172
AVERAGE	0.817										
PRESENT VALUE	6.391										

HIGH COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.537	0.234	0.156	0.150	0.134	0.118					
COHORT 2		1.537	0.234	0.156	0.150	0.134	0.118				
COHORT 3			1.537	0.234	0.156	0.150	0.134	0.118			
COHORT 4				1.537	0.234	0.156	0.150	0.134	0.118		
COHORT 5					1.537	0.234	0.156	0.150	0.134	0.118	
ANNUAL CASH FLOW											
PROJECTED	1.537	1.771	1.927	2.077	2.211	0.792	0.558	0.402	0.252	0.118	11.646
AVERAGE	1.165										
PRESENT VALUE	8.991										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 9. 200.00 VOLTS PER METER

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.832	0.067	0.045	0.043	0.039	0.034					
COHORT 2		0.832	0.067	0.045	0.043	0.039	0.034				
COHORT 3			0.832	0.067	0.045	0.043	0.039	0.034			
COHORT 4				0.832	0.067	0.045	0.043	0.039	0.034		
COHORT 5					0.832	0.067	0.045	0.043	0.039	0.034	
ANNUAL CASH FLOW											
PROJECTED	0.832	0.899	0.944	0.987	1.026	0.228	0.161	0.116	0.073	0.034	5.299
AVERAGE	0.530										
PRESENT VALUE	4.212										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.165	0.135	0.090	0.086	0.077	0.068					
COHORT 2		1.165	0.135	0.090	0.086	0.077	0.068				
COHORT 3			1.165	0.135	0.090	0.086	0.077	0.068			
COHORT 4				1.165	0.135	0.090	0.086	0.077	0.068		
COHORT 5					1.165	0.135	0.090	0.086	0.077	0.068	
ANNUAL CASH FLOW											
PROJECTED	1.165	1.299	1.389	1.475	1.552	0.456	0.321	0.231	0.145	0.068	8.103
AVERAGE	0.810										
PRESENT VALUE	6.342										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.531	0.229	0.153	0.146	0.131	0.116					
COHORT 2		1.531	0.229	0.153	0.146	0.131	0.116				
COHORT 3			1.531	0.229	0.153	0.146	0.131	0.116			
COHORT 4				1.531	0.229	0.153	0.146	0.131	0.116		
COHORT 5					1.531	0.229	0.153	0.146	0.131	0.116	
ANNUAL CASH FLOW											
PROJECTED	1.531	1.759	1.912	2.059	2.190	0.775	0.546	0.393	0.247	0.116	11.529
AVERAGE	1.153										
PRESENT VALUE	8.909										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 10. 223.87 VOLTS PER METER

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.791	0.034	0.023	0.022	0.020	0.017					
COHORT 2		0.791	0.034	0.023	0.022	0.020	0.017				
COHORT 3			0.791	0.034	0.023	0.022	0.020	0.017			
COHORT 4				0.791	0.034	0.023	0.022	0.020	0.017		
COHORT 5					0.791	0.034	0.023	0.022	0.020	0.017	
ANNUAL CASH FLOW PROJECTED	0.791	0.826	0.849	0.871	0.890	0.117	0.082	0.059	0.037	0.017	4.539
AVERAGE	0.454										
PRESENT VALUE	3.679										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.083	0.069	0.046	0.044	0.039	0.035					
COHORT 2		1.083	0.069	0.046	0.044	0.039	0.035				
COHORT 3			1.083	0.069	0.046	0.044	0.039	0.035			
COHORT 4				1.083	0.069	0.046	0.044	0.039	0.035		
COHORT 5					1.083	0.069	0.046	0.044	0.039	0.035	
ANNUAL CASH FLOW PROJECTED	1.083	1.152	1.198	1.242	1.282	0.233	0.164	0.118	0.074	0.035	6.582
AVERAGE	0.658										
PRESENT VALUE	5.277										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.392	0.117	0.078	0.075	0.067	0.059					
COHORT 2		1.392	0.117	0.078	0.075	0.067	0.059				
COHORT 3			1.392	0.117	0.078	0.075	0.067	0.059			
COHORT 4				1.392	0.117	0.078	0.075	0.067	0.059		
COHORT 5					1.392	0.117	0.078	0.075	0.067	0.059	
ANNUAL CASH FLOW PROJECTED	1.392	1.509	1.588	1.662	1.729	0.396	0.279	0.201	0.126	0.059	8.943
AVERAGE	0.894										
PRESENT VALUE	7.098										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 11. 244.91 VOLTS PER METER

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.790	0.033	0.022	0.021	0.019	0.017					
COHORT 2		0.790	0.033	0.022	0.021	0.019	0.017				
COHORT 3			0.790	0.033	0.022	0.021	0.019	0.017			
COHORT 4				0.790	0.033	0.022	0.021	0.019	0.017		
COHORT 5					0.790	0.033	0.022	0.021	0.019	0.017	
ANNUAL CASH FLOW PROJECTED	0.790	0.823	0.845	0.867	0.886	0.113	0.079	0.057	0.036	0.017	4.513
AVERAGE	0.451										
PRESENT VALUE	3.661										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.080	0.067	0.044	0.043	0.038	0.034					
COHORT 2		1.080	0.067	0.044	0.043	0.038	0.034				
COHORT 3			1.080	0.067	0.044	0.043	0.038	0.034			
COHORT 4				1.080	0.067	0.044	0.043	0.038	0.034		
COHORT 5					1.080	0.067	0.044	0.043	0.038	0.034	
ANNUAL CASH FLOW PROJECTED	1.080	1.147	1.191	1.234	1.272	0.225	0.159	0.114	0.072	0.034	6.529
AVERAGE	0.653										
PRESENT VALUE	5.240										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.388	0.113	0.076	0.072	0.065	0.057					
COHORT 2		1.388	0.113	0.076	0.072	0.065	0.057				
COHORT 3			1.388	0.113	0.076	0.072	0.065	0.057			
COHORT 4				1.388	0.113	0.076	0.072	0.065	0.057		
COHORT 5					1.388	0.113	0.076	0.072	0.065	0.057	
ANNUAL CASH FLOW PROJECTED	1.388	1.501	1.576	1.649	1.713	0.383	0.270	0.194	0.122	0.057	8.853
AVERAGE	0.885										
PRESENT VALUE	7.035										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 12. 264.55 VOLTS PER METER

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.787	0.031	0.021	0.020	0.018	0.016					
COHORT 2		0.787	0.031	0.021	0.020	0.018	0.016				
COHORT 3			0.787	0.031	0.021	0.020	0.018	0.016			
COHORT 4				0.787	0.031	0.021	0.020	0.018	0.016		
COHORT 5					0.787	0.031	0.021	0.020	0.018	0.016	
ANNUAL CASH FLOW											
PROJECTED	0.787	0.818	0.839	0.859	0.877	0.105	0.074	0.053	0.034	0.016	4.461
AVERAGE	0.446										
PRESENT VALUE	3.625										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.075	0.062	0.042	0.040	0.036	0.031					
COHORT 2		1.075	0.062	0.042	0.040	0.036	0.031				
COHORT 3			1.075	0.062	0.042	0.040	0.036	0.031			
COHORT 4				1.075	0.062	0.042	0.040	0.036	0.031		
COHORT 5					1.075	0.062	0.042	0.040	0.036	0.031	
ANNUAL CASH FLOW											
PROJECTED	1.075	1.137	1.179	1.218	1.254	0.210	0.148	0.107	0.067	0.031	6.427
AVERAGE	0.643										
PRESENT VALUE	5.168										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.378	0.106	0.071	0.068	0.060	0.053					
COHORT 2		1.378	0.106	0.071	0.068	0.060	0.053				
COHORT 3			1.378	0.106	0.071	0.068	0.060	0.053			
COHORT 4				1.378	0.106	0.071	0.068	0.060	0.053		
COHORT 5					1.378	0.106	0.071	0.068	0.060	0.053	
ANNUAL CASH FLOW											
PROJECTED	1.378	1.484	1.554	1.622	1.682	0.358	0.252	0.181	0.114	0.053	8.680
AVERAGE	0.868										
PRESENT VALUE	6.913										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 13. 281.84 VOLTS PER METER

LOW COST	0	1	2	3	4	5	6	7	8	9	TOTAL
				TIME PERIOD							
COHORT 1	0.786	0.030	0.020	0.019	0.017	0.015					
COHORT 2		0.786	0.030	0.020	0.019	0.017	0.015				
COHORT 3			0.786	0.030	0.020	0.019	0.017	0.015			
COHORT 4				0.786	0.030	0.020	0.019	0.017	0.015		
COHORT 5					0.786	0.030	0.020	0.019	0.017	0.015	
ANNUAL CASH FLOW PROJECTED	0.786	0.817	0.837	0.856	0.874	0.103	0.072	0.052	0.033	0.015	4.445
AVERAGE	0.444										
PRESENT VALUE	3.613										

MEDIUM COST	0	1	2	3	4	5	6	7	8	9	TOTAL
				TIME PERIOD							
COHORT 1	1.073	0.061	0.041	0.039	0.035	0.031					
COHORT 2		1.073	0.061	0.041	0.039	0.035	0.031				
COHORT 3			1.073	0.061	0.041	0.039	0.035	0.031			
COHORT 4				1.073	0.061	0.041	0.039	0.035	0.031		
COHORT 5					1.073	0.061	0.041	0.039	0.035	0.031	
ANNUAL CASH FLOW PROJECTED	1.073	1.134	1.175	1.213	1.248	0.206	0.145	0.104	0.065	0.031	6.394
AVERAGE	0.639										
PRESENT VALUE	5.145										

HIGH COST	0	1	2	3	4	5	6	7	8	9	TOTAL
				TIME PERIOD							
COHORT 1	1.375	0.103	0.069	0.066	0.059	0.052					
COHORT 2		1.375	0.103	0.069	0.066	0.059	0.052				
COHORT 3			1.375	0.103	0.069	0.066	0.059	0.052			
COHORT 4				1.375	0.103	0.069	0.066	0.059	0.052		
COHORT 5					1.375	0.103	0.069	0.066	0.059	0.052	
ANNUAL CASH FLOW PROJECTED	1.375	1.478	1.547	1.613	1.673	0.349	0.246	0.177	0.111	0.052	8.624
AVERAGE	0.862										
PRESENT VALUE	6.874										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 14. 300.00 VOLTS PER METER

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.786	0.030	0.020	0.019	0.017	0.015					
COHORT 2		0.786	0.030	0.020	0.019	0.017	0.015				
COHORT 3			0.786	0.030	0.020	0.019	0.017	0.015			
COHORT 4				0.786	0.030	0.020	0.019	0.017	0.015		
COHORT 5					0.786	0.030	0.020	0.019	0.017	0.015	
ANNUAL CASH FLOW											
PROJECTED	0.786	0.816	0.837	0.856	0.873	0.103	0.072	0.052	0.033	0.015	4.444
AVERAGE	0.444										
PRESENT VALUE	3.613										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.073	0.061	0.040	0.039	0.035	0.031					
COHORT 2		1.073	0.061	0.040	0.039	0.035	0.031				
COHORT 3			1.073	0.061	0.040	0.039	0.035	0.031			
COHORT 4				1.073	0.061	0.040	0.039	0.035	0.031		
COHORT 5					1.073	0.061	0.040	0.039	0.035	0.031	
ANNUAL CASH FLOW											
PROJECTED	1.073	1.134	1.174	1.213	1.248	0.205	0.145	0.104	0.065	0.031	6.392
AVERAGE	0.639										
PRESENT VALUE	5.144										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.375	0.103	0.069	0.066	0.059	0.052					
COHORT 2		1.375	0.103	0.069	0.066	0.059	0.052				
COHORT 3			1.375	0.103	0.069	0.066	0.059	0.052			
COHORT 4				1.375	0.103	0.069	0.066	0.059	0.052		
COHORT 5					1.375	0.103	0.069	0.066	0.059	0.052	
ANNUAL CASH FLOW											
PROJECTED	1.375	1.478	1.547	1.613	1.672	0.349	0.246	0.177	0.111	0.052	8.620
AVERAGE	0.862										
PRESENT VALUE	6.872										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 15. 316.23 VOLTS PER METER

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.786	0.030	0.020	0.019	0.017	0.015					
COHORT 2		0.786	0.030	0.020	0.019	0.017	0.015				
COHORT 3			0.786	0.030	0.020	0.019	0.017	0.015			
COHORT 4				0.786	0.030	0.020	0.019	0.017	0.015		
COHORT 5					0.786	0.030	0.020	0.019	0.017	0.015	
ANNUAL CASH FLOW											
PROJECTED	0.786	0.815	0.835	0.855	0.872	0.101	0.071	0.051	0.032	0.015	4.434
AVERAGE	0.443										
PRESENT VALUE	3.605										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.072	0.060	0.040	0.038	0.034	0.030					
COHORT 2		1.072	0.060	0.040	0.038	0.034	0.030				
COHORT 3			1.072	0.060	0.040	0.038	0.034	0.030			
COHORT 4				1.072	0.060	0.040	0.038	0.034	0.030		
COHORT 5					1.072	0.060	0.040	0.038	0.034	0.030	
ANNUAL CASH FLOW											
PROJECTED	1.072	1.132	1.172	1.210	1.244	0.202	0.142	0.103	0.064	0.030	6.371
AVERAGE	0.637										
PRESENT VALUE	5.129										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.373	0.102	0.068	0.065	0.058	0.051					
COHORT 2		1.373	0.102	0.068	0.065	0.058	0.051				
COHORT 3			1.373	0.102	0.068	0.065	0.058	0.051			
COHORT 4				1.373	0.102	0.068	0.065	0.058	0.051		
COHORT 5					1.373	0.102	0.068	0.065	0.058	0.051	
ANNUAL CASH FLOW											
PROJECTED	1.373	1.475	1.543	1.607	1.666	0.344	0.242	0.174	0.110	0.051	8.585
AVERAGE	0.859										
PRESENT VALUE	6.847										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 16. 446.68 VOLTS PER METER

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.783	0.027	0.018	0.018	0.016	0.014					
COHORT 2		0.783	0.027	0.018	0.018	0.016	0.014				
COHORT 3			0.783	0.027	0.018	0.018	0.016	0.014			
COHORT 4				0.783	0.027	0.018	0.018	0.016	0.014		
COHORT 5					0.783	0.027	0.018	0.018	0.016	0.014	
ANNUAL CASH FLOW											
PROJECTED	0.783	0.810	0.829	0.846	0.862	0.093	0.066	0.047	0.030	0.014	4.379
AVERAGE	0.438										
PRESENT VALUE	3.567										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.066	0.055	0.037	0.035	0.031	0.028					
COHORT 2		1.066	0.055	0.037	0.035	0.031	0.028				
COHORT 3			1.066	0.055	0.037	0.035	0.031	0.028			
COHORT 4				1.066	0.055	0.037	0.035	0.031	0.028		
COHORT 5					1.066	0.055	0.037	0.035	0.031	0.028	
ANNUAL CASH FLOW											
PROJECTED	1.066	1.121	1.158	1.193	1.224	0.186	0.131	0.094	0.059	0.028	6.261
AVERAGE	0.626										
PRESENT VALUE	5.052										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.363	0.093	0.062	0.060	0.054	0.047					
COHORT 2		1.363	0.093	0.062	0.060	0.054	0.047				
COHORT 3			1.363	0.093	0.062	0.060	0.054	0.047			
COHORT 4				1.363	0.093	0.062	0.060	0.054	0.047		
COHORT 5					1.363	0.093	0.062	0.060	0.054	0.047	
ANNUAL CASH FLOW											
PROJECTED	1.363	1.457	1.519	1.579	1.632	0.316	0.223	0.161	0.101	0.047	8.398
AVERAGE	0.840										
PRESENT VALUE	6.716										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 17. 707.95 VOLTS PER METER

LOW COST	0	1	2	TIME PERIOD 3	4	5	6	7	8	9	TOTAL
COHORT 1	0.757	0.007	0.005	0.004	0.004	0.004					
COHORT 2		0.757	0.007	0.005	0.004	0.004	0.004				
COHORT 3			0.757	0.007	0.005	0.004	0.004	0.004			
COHORT 4				0.757	0.007	0.005	0.004	0.004	0.004		
COHORT 5					0.757	0.007	0.005	0.004	0.004	0.004	
ANNUAL CASH FLOW PROJECTED	0.757	0.764	0.769	0.773	0.777	0.024	0.017	0.012	0.008	0.004	3.905
AVERAGE	0.390										
PRESENT VALUE	3.235										

MEDIUM COST	0	1	2	TIME PERIOD 3	4	5	6	7	8	9	TOTAL
COHORT 1	1.016	0.014	0.009	0.009	0.008	0.007					
COHORT 2		1.016	0.014	0.009	0.009	0.008	0.007				
COHORT 3			1.016	0.014	0.009	0.009	0.008	0.007			
COHORT 4				1.016	0.014	0.009	0.009	0.008	0.007		
COHORT 5					1.016	0.014	0.009	0.009	0.008	0.007	
ANNUAL CASH FLOW PROJECTED	1.016	1.029	1.039	1.048	1.056	0.047	0.033	0.024	0.015	0.007	5.314
AVERAGE	0.531										
PRESENT VALUE	4.389										

HIGH COST	0	1	2	TIME PERIOD 3	4	5	6	7	8	9	TOTAL
COHORT 1	1.277	0.024	0.016	0.015	0.014	0.012					
COHORT 2		1.277	0.024	0.016	0.015	0.014	0.012				
COHORT 3			1.277	0.024	0.016	0.015	0.014	0.012			
COHORT 4				1.277	0.024	0.016	0.015	0.014	0.012		
COHORT 5					1.277	0.024	0.016	0.015	0.014	0.012	
ANNUAL CASH FLOW PROJECTED	1.277	1.301	1.317	1.332	1.345	0.080	0.057	0.041	0.026	0.012	6.787
AVERAGE	0.679										
PRESENT VALUE	5.587										

TABLE E-2. (CONTINUED)

GUIDANCE LEVEL 18. 1000.00 VOLTS PER METER

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.753	0.003	0.002	0.002	0.002	0.002					
COHORT 2		0.753	0.003	0.002	0.002	0.002	0.002				
COHORT 3			0.753	0.003	0.002	0.002	0.002	0.002			
COHORT 4				0.753	0.003	0.002	0.002	0.002	0.002		
COHORT 5					0.753	0.003	0.002	0.002	0.002	0.002	
ANNUAL CASH FLOW											
PROJECTED	0.753	0.756	0.758	0.760	0.762	0.011	0.008	0.006	0.004	0.002	3.820
AVERAGE	0.382										
PRESENT VALUE	3.175										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.006	0.007	0.004	0.004	0.004	0.003					
COHORT 2		1.006	0.007	0.004	0.004	0.004	0.003				
COHORT 3			1.006	0.007	0.004	0.004	0.004	0.003			
COHORT 4				1.006	0.007	0.004	0.004	0.004	0.003		
COHORT 5					1.006	0.007	0.004	0.004	0.004	0.003	
ANNUAL CASH FLOW											
PROJECTED	1.006	1.013	1.017	1.022	1.025	0.022	0.016	0.011	0.007	0.003	5.144
AVERAGE	0.514										
PRESENT VALUE	4.269										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.262	0.011	0.007	0.007	0.006	0.006					
COHORT 2		1.262	0.011	0.007	0.007	0.006	0.006				
COHORT 3			1.262	0.011	0.007	0.007	0.006	0.006			
COHORT 4				1.262	0.011	0.007	0.007	0.006	0.006		
COHORT 5					1.262	0.011	0.007	0.007	0.006	0.006	
ANNUAL CASH FLOW											
PROJECTED	1.262	1.273	1.280	1.288	1.294	0.038	0.027	0.019	0.012	0.006	6.498
AVERAGE	0.650										
PRESENT VALUE	5.385										

TABLE E-3. AN ESTIMATE OF THE EFFECTS ON THE AVERAGE PROFITABLE AM BROADCAST STATION OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 3 COST LEVELS. RESULTS ARE SHOWN FOR THE AVERAGE COST OF COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. NUMBERS ARE IN THOUSANDS OF DOLLARS.

GUIDANCE LEVEL 1. 10.00 VOLTS PER METER LOW COST

TIME PERIOD

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.629	1.916	1.788	1.661	1.533	1.405	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.221	101.934	102.062	102.189	102.317	102.445	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	1.277	1.277	1.277	1.277	1.277	
(-) DEPRECIATION	0.	0.	1.277	1.873	1.788	1.788	1.788	
TAXABLE INCOME	103.850	102.350	101.934	101.466	101.678	101.806	101.934	
GROSS TAX	27.521	26.831	26.640	26.424	26.522	26.581	26.640	
INVESTMENT TAX CREDIT	0.	0.852	0.	0.	0.	0.	0.	
NET TAXES	27.521	25.979	26.640	26.424	26.522	26.581	26.640	
NET INCOME	76.329	74.242	75.294	75.638	75.667	75.736	75.805	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.629	1.916	1.788	1.661	1.533	1.405	11.932
TAX SAVINGS	0.	1.542	0.881	1.097	0.999	0.940	0.881	6.340
NET COMPLIANCE MEASURE COST	0.	2.087	1.035	0.691	0.662	0.593	0.524	5.592
AVERAGE ANNUAL NET COST		0.932						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 4.025	COHORT1 4.827	COHORT2 4.388	COHORT3 3.989	COHORT4 3.626	COHORT5 3.297	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 1. 10.00 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	5.193	2.874	2.682	2.491	2.299	2.108	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	98.657	100.976	101.168	101.359	101.551	101.742	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	1.916	1.916	1.916	1.916	1.916	
(-) DEPRECIATION	0.	0.	1.916	2.810	2.682	2.682	2.682	
TAXABLE INCOME	103.850	101.850	100.976	100.273	100.593	100.784	100.976	
GROSS TAX	27.521	26.601	26.199	25.876	26.023	26.111	26.199	
INVESTMENT TAX CREDIT	0.	1.277	0.	0.	0.	0.	0.	
NET TAXES	27.521	25.324	26.199	25.876	26.023	26.111	26.199	
NET INCOME	76.329	73.333	74.777	75.292	75.336	75.440	75.543	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	5.193	2.874	2.682	2.491	2.299	2.108	17.648
TAX SAVINGS	0.	2.197	1.322	1.645	1.498	1.410	1.322	9.395
NET COMPLIANCE MEASURE COST	0.	2.996	1.552	1.037	0.993	0.889	0.786	8.252
AVERAGE ANNUAL NET COST		1.375						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 5.925	COHORT1 7.105	COHORT2 6.459	COHORT3 5.872	COHORT4 5.338	COHORT5 4.853	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 1. 10.00 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	6.758	3.832	3.577	3.321	3.066	2.810	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	97.092	100.018	100.273	100.529	100.784	101.040	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	2.555	2.555	2.555	2.555	2.555	
(-) DEPRECIATION	0.	0.	2.555	3.747	3.577	3.577	3.577	
TAXABLE INCOME	103.850	101.350	100.018	99.081	99.507	99.762	100.018	
GROSS TAX	27.521	26.371	25.758	25.382	25.553	25.655	25.758	
INVESTMENT TAX CREDIT	0.	1.703	0.	0.	0.	0.	0.	
NET TAXES	27.521	24.668	25.758	25.382	25.553	25.655	25.758	
NET INCOME	76.329	72.424	74.260	74.891	74.976	75.129	75.282	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	6.758	3.832	3.577	3.321	3.066	2.810	23.364
TAX SAVINGS	0.	2.853	1.763	2.139	1.968	1.866	1.763	12.351
NET COMPLIANCE MEASURE COST	0.	3.905	2.069	1.438	1.353	1.200	1.047	11.012
AVERAGE ANNUAL NET COST		1.835						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 7.890	COHORT1 9.461	COHORT2 8.601	COHORT3 7.819	COHORT4 7.108	COHORT5 6.462	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 2. 31.62 VOLTS PER METER LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.366	0.779	0.727	0.675	0.623	0.571	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.484	103.071	103.123	103.175	103.227	103.279	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.520	0.520	0.520	0.520	0.520	
(-) DEPRECIATION	0.	0.	0.520	0.762	0.727	0.727	0.727	
TAXABLE INCOME	103.850	102.350	103.071	102.880	102.967	103.019	103.071	
GROSS TAX	27.521	26.831	27.163	27.075	27.115	27.139	27.163	
INVESTMENT TAX CREDIT	0.	0.346	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.485	27.163	27.075	27.115	27.139	27.163	
NET INCOME	76.329	74.999	75.908	76.048	76.060	76.088	76.116	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.366	0.779	0.727	0.675	0.623	0.571	5.743
TAX SAVINGS	0.	1.036	0.358	0.446	0.406	0.382	0.358	2.988
NET COMPLIANCE MEASURE COST	0.	1.330	0.421	0.281	0.269	0.241	0.213	2.755
AVERAGE ANNUAL NET COST		0.459						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.038	COHORT1 2.444	COHORT2 2.221	COHORT3 2.019	COHORT4 1.836	COHORT5 1.669	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 2. 31.62 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.299	1.169	1.091	1.013	0.935	0.857	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.551	102.681	102.759	102.837	102.915	102.993	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.779	0.779	0.779	0.779	0.779	
(-) DEPRECIATION	0.	0.	0.779	1.143	1.091	1.091	1.091	
TAXABLE INCOME	103.850	101.850	102.681	102.395	102.525	102.603	102.681	
GROSS TAX	27.521	26.601	26.983	26.852	26.912	26.947	26.983	
INVESTMENT TAX CREDIT	0.	0.520	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.081	26.983	26.852	26.912	26.947	26.983	
NET INCOME	76.329	74.470	75.698	75.907	75.925	75.967	76.010	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	3.299	1.169	1.091	1.013	0.935	0.857	8.364
TAX SAVINGS	0.	1.440	0.538	0.669	0.609	0.574	0.538	4.367
NET COMPLIANCE MEASURE COST	0.	1.859	0.631	0.422	0.404	0.362	0.319	3.997
AVERAGE ANNUAL NET COST		0.666						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.944	COHORT1 3.530	COHORT2 3.209	COHORT3 2.918	COHORT4 2.652	COHORT5 2.411	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 2. 31.62 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	4.232	1.559	1.455	1.351	1.247	1.143	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	99.618	102.291	102.395	102.499	102.603	102.707	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	1.039	1.039	1.039	1.039	1.039	
(-) DEPRECIATION	0.	0.	1.039	1.524	1.455	1.455	1.455	
TAXABLE INCOME	103.850	101.350	102.291	101.910	102.084	102.188	102.291	
GROSS TAX	27.521	26.371	26.804	26.629	26.708	26.756	26.804	
INVESTMENT TAX CREDIT	0.	0.693	0.	0.	0.	0.	0.	
NET TAXES	27.521	25.678	26.804	26.629	26.708	26.756	26.804	
NET INCOME	76.329	73.940	75.487	75.767	75.791	75.847	75.903	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	4.232	1.559	1.455	1.351	1.247	1.143	10.985
TAX SAVINGS	0.	1.843	0.717	0.892	0.813	0.765	0.717	5.746
NET COMPLIANCE MEASURE COST	0.	2.389	0.842	0.562	0.538	0.482	0.426	5.239
AVERAGE ANNUAL NET COST		0.873						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 3.851	COHORT1 4.617	COHORT2 4.197	COHORT3 3.816	COHORT4 3.469	COHORT5 3.154	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 3. 44.67 VOLTS PER METER

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	LOW COST TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.191	0.622	0.581	0.539	0.498	0.456	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.659	103.228	103.269	103.311	103.352	103.394	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.415	0.415	0.415	0.415	0.415	
(-) DEPRECIATION	0.	0.	0.415	0.609	0.581	0.581	0.581	
TAXABLE INCOME	103.850	102.350	103.228	103.076	103.145	103.186	103.228	
GROSS TAX	27.521	26.831	27.235	27.165	27.197	27.216	27.235	
INVESTMENT TAX CREDIT	0.	0.277	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.554	27.235	27.165	27.197	27.216	27.235	
NET INCOME	76.329	75.104	75.993	76.104	76.114	76.136	76.159	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.191	0.622	0.581	0.539	0.498	0.456	4.888
TAX SAVINGS	0.	0.967	0.286	0.356	0.324	0.305	0.286	2.525
NET COMPLIANCE MEASURE COST	0.	1.225	0.336	0.225	0.215	0.193	0.170	2.363
AVERAGE ANNUAL NET COST		0.394						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.764	COHORT1 2.115	COHORT2 1.922	COHORT3 1.748	COHORT4 1.589	COHORT5 1.444	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 3. 44.67 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.037	0.933	0.871	0.809	0.747	0.685	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.813	102.917	102.979	103.041	103.103	103.165	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.622	0.622	0.622	0.622	0.622	
(-) DEPRECIATION	0.	0.	0.622	0.913	0.871	0.871	0.871	
TAXABLE INCOME	103.850	101.850	102.917	102.688	102.792	102.854	102.917	
GROSS TAX	27.521	26.601	27.092	26.987	27.034	27.063	27.092	
INVESTMENT TAX CREDIT	0.	0.415	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.186	27.092	26.987	27.034	27.063	27.092	
NET INCOME	76.329	74.627	75.825	75.992	76.007	76.040	76.074	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.037	0.933	0.871	0.809	0.747	0.685	7.082
TAX SAVINGS	0.	1.335	0.429	0.534	0.487	0.458	0.429	3.673
NET COMPLIANCE MEASURE COST	0.	1.702	0.504	0.337	0.322	0.289	0.255	3.410
AVERAGE ANNUAL NET COST		0.568						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.533	COHORT1 3.037	COHORT2 2.761	COHORT3 2.510	COHORT4 2.282	COHORT5 2.074	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 3. 44.67 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.883	1.245	1.162	1.079	0.996	0.913	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	99.967	102.605	102.688	102.771	102.854	102.937	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.830	0.830	0.830	0.830	0.830	
(-) DEPRECIATION	0.	0.	0.830	1.217	1.162	1.162	1.162	
TAXABLE INCOME	103.850	101.350	102.605	102.301	102.439	102.522	102.605	
GROSS TAX	27.521	26.371	26.948	26.808	26.872	26.910	26.948	
INVESTMENT TAX CREDIT	0.	0.553	0.	0.	0.	0.	0.	
NET TAXES	27.521	25.818	26.948	26.808	26.872	26.910	26.948	
NET INCOME	76.329	74.149	75.657	75.880	75.899	75.944	75.989	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.883	1.245	1.162	1.079	0.996	0.913	9.277
TAX SAVINGS	0.	1.703	0.573	0.713	0.649	0.611	0.573	4.820
NET COMPLIANCE MEASURE COST	0.	2.180	0.672	0.449	0.430	0.385	0.340	4.456
AVERAGE ANNUAL NET COST		0.743						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 3.302	COHORT1 3.959	COHORT2 3.599	COHORT3 3.272	COHORT4 2.975	COHORT5 2.704	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 4. 70.79 VOLTS PER METER

LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.028	0.476	0.444	0.412	0.380	0.349	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.822	103.374	103.406	103.438	103.470	103.501	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.317	0.317	0.317	0.317	0.317	
(-) DEPRECIATION	0.	0.	0.317	0.465	0.444	0.444	0.444	
TAXABLE INCOME	103.850	102.350	103.374	103.258	103.311	103.343	103.374	
GROSS TAX	27.521	26.831	27.302	27.249	27.273	27.288	27.302	
INVESTMENT TAX CREDIT	0.	0.211	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.620	27.302	27.249	27.273	27.288	27.302	
NET INCOME	76.329	75.202	76.072	76.157	76.165	76.182	76.199	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.028	0.476	0.444	0.412	0.380	0.349	4.089
TAX SAVINGS	0.	0.901	0.219	0.272	0.248	0.233	0.219	2.092
NET COMPLIANCE MEASURE COST	0.	1.127	0.257	0.172	0.164	0.147	0.130	1.997
AVERAGE ANNUAL NET COST		0.333						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.507	COHORT1 1.807	COHORT2 1.643	COHORT3 1.493	COHORT4 1.358	COHORT5 1.234	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 4. 70.79 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.793	0.713	0.666	0.618	0.571	0.523	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.057	103.137	103.184	103.232	103.279	103.327	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.476	0.476	0.476	0.476	0.476	
(-) DEPRECIATION	0.	0.	0.476	0.698	0.666	0.666	0.666	
TAXABLE INCOME	103.850	101.850	103.137	102.962	103.041	103.089	103.137	
GROSS TAX	27.521	26.601	27.193	27.113	27.149	27.171	27.193	
INVESTMENT TAX CREDIT	0.	0.317	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.284	27.193	27.113	27.149	27.171	27.193	
NET INCOME	76.329	74.773	75.944	76.072	76.083	76.108	76.134	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.793	0.713	0.666	0.618	0.571	0.523	5.884
TAX SAVINGS	0.	1.237	0.328	0.408	0.372	0.350	0.328	3.024
NET COMPLIANCE MEASURE COST	0.	1.556	0.385	0.257	0.246	0.221	0.195	2.860
AVERAGE ANNUAL NET COST		0.477						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.148	COHORT1 2.575	COHORT2 2.341	COHORT3 2.128	COHORT4 1.935	COHORT5 1.759	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 4. 70.79 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.557	0.951	0.888	0.824	0.761	0.698	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.293	102.899	102.962	103.026	103.089	103.152	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.634	0.634	0.634	0.634	0.634	
(-) DEPRECIATION	0.	0.	0.634	0.930	0.888	0.888	0.888	
TAXABLE INCOME	103.850	101.350	102.899	102.666	102.772	102.835	102.899	
GROSS TAX	27.521	26.371	27.083	26.977	27.025	27.054	27.083	
INVESTMENT TAX CREDIT	0.	0.423	0.	0.	0.	0.	0.	
NET TAXES	27.521	25.948	27.083	26.977	27.025	27.054	27.083	
NET INCOME	76.329	74.345	75.815	75.986	76.001	76.035	76.069	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.557	0.951	0.888	0.824	0.761	0.698	7.679
TAX SAVINGS	0.	1.573	0.438	0.544	0.496	0.467	0.438	3.955
NET COMPLIANCE MEASURE COST	0.	1.984	0.514	0.343	0.328	0.294	0.260	3.724
AVERAGE ANNUAL NET COST		0.621						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.789	COHORT1 3.344	COHORT2 3.040	COHORT3 2.764	COHORT4 2.512	COHORT5 2.284	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 5. 86.60 VOLTS PER METER LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.983	0.435	0.406	0.377	0.348	0.319	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.867	103.415	103.444	103.473	103.502	103.531	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.290	0.290	0.290	0.290	0.290	
(-) DEPRECIATION	0.	0.	0.290	0.425	0.406	0.406	0.406	
TAXABLE INCOME	103.850	102.350	103.415	103.309	103.357	103.386	103.415	
GROSS TAX	27.521	26.831	27.321	27.272	27.294	27.308	27.321	
INVESTMENT TAX CREDIT	0.	0.193	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.638	27.321	27.272	27.294	27.308	27.321	
NET INCOME	76.329	75.229	76.094	76.172	76.179	76.194	76.210	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.983	0.435	0.406	0.377	0.348	0.319	3.869
TAX SAVINGS	0.	0.883	0.200	0.249	0.227	0.213	0.200	1.973
NET COMPLIANCE MEASURE COST	0.	1.100	0.235	0.157	0.150	0.135	0.119	1.896
AVERAGE ANNUAL NET COST		0.316						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.436	COHORT1 1.722	COHORT2 1.565	COHORT3 1.423	COHORT4 1.294	COHORT5 1.176	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 5. 86.60 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.725	0.653	0.609	0.566	0.522	0.479	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.125	103.197	103.241	103.284	103.328	103.371	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.435	0.435	0.435	0.435	0.435	
(-) DEPRECIATION	0.	0.	0.435	0.638	0.609	0.609	0.609	
TAXABLE INCOME	103.850	101.850	103.197	103.038	103.110	103.154	103.197	
GROSS TAX	27.521	26.601	27.221	27.147	27.181	27.201	27.221	
INVESTMENT TAX CREDIT	0.	0.290	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.311	27.221	27.147	27.181	27.201	27.221	
NET INCOME	76.329	74.814	75.977	76.093	76.104	76.127	76.151	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.725	0.653	0.609	0.566	0.522	0.479	5.553
TAX SAVINGS	0.	1.210	0.300	0.374	0.340	0.320	0.300	2.844
NET COMPLIANCE MEASURE COST	0.	1.515	0.352	0.236	0.225	0.202	0.178	2.709
AVERAGE ANNUAL NET COST		0.451						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.042	COHORT1 2.448	COHORT2 2.225	COHORT3 2.023	COHORT4 1.839	COHORT5 1.672	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 5. 86.60 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.467	0.870	0.812	0.754	0.696	0.638	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.383	102.980	103.038	103.096	103.154	103.212	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.580	0.580	0.580	0.580	0.580	
(-) DEPRECIATION	0.	0.	0.580	0.851	0.812	0.812	0.812	
TAXABLE INCOME	103.850	101.350	102.980	102.767	102.864	102.922	102.980	
GROSS TAX	27.521	26.371	27.121	27.023	27.067	27.094	27.121	
INVESTMENT TAX CREDIT	0.	0.387	0.	0.	0.	0.	0.	
NET TAXES	27.521	25.984	27.121	27.023	27.067	27.094	27.121	
NET INCOME	76.329	74.399	75.859	76.015	76.029	76.060	76.091	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.467	0.870	0.812	0.754	0.696	0.638	7.237
TAX SAVINGS	0.	1.537	0.400	0.498	0.454	0.427	0.400	3.716
NET COMPLIANCE MEASURE COST	0.	1.930	0.470	0.314	0.300	0.269	0.238	3.521
AVERAGE ANNUAL NET COST		0.587						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.647	COHORT1 3.174	COHORT2 2.885	COHORT3 2.623	COHORT4 2.385	COHORT5 2.168	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 6. 100.00 VOLTS PER METER LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.972	0.425	0.396	0.368	0.340	0.311	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.878	103.425	103.454	103.482	103.510	103.539	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.283	0.283	0.283	0.283	0.283	
(-) DEPRECIATION	0.	0.	0.283	0.415	0.396	0.396	0.396	
TAXABLE INCOME	103.850	102.350	103.425	103.321	103.369	103.397	103.425	
GROSS TAX	27.521	26.831	27.326	27.278	27.300	27.313	27.326	
INVESTMENT TAX CREDIT	0.	0.189	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.642	27.326	27.278	27.300	27.313	27.326	
NET INCOME	76.329	75.236	76.100	76.176	76.182	76.198	76.213	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.972	0.425	0.396	0.368	0.340	0.311	3.812
TAX SAVINGS	0.	0.879	0.195	0.243	0.221	0.208	0.195	1.942
NET COMPLIANCE MEASURE COST	0.	1.093	0.229	0.153	0.147	0.131	0.116	1.870
AVERAGE ANNUAL NET COST		0.312						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.418	COHORT1 1.700	COHORT2 1.546	COHORT3 1.405	COHORT4 1.277	COHORT5 1.161	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 6. 100.00 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.708	0.637	0.595	0.552	0.510	0.467	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.142	103.213	103.255	103.298	103.340	103.383	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.425	0.425	0.425	0.425	0.425	
(-) DEPRECIATION	0.	0.	0.425	0.623	0.595	0.595	0.595	
TAXABLE INCOME	103.850	101.850	103.213	103.057	103.128	103.170	103.213	
GROSS TAX	27.521	26.601	27.228	27.156	27.189	27.208	27.228	
INVESTMENT TAX CREDIT	0.	0.283	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.318	27.228	27.156	27.189	27.208	27.228	
NET INCOME	76.329	74.824	75.985	76.099	76.109	76.132	76.155	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.708	0.637	0.595	0.552	0.510	0.467	5.469
TAX SAVINGS	0.	1.203	0.293	0.365	0.332	0.313	0.293	2.799
NET COMPLIANCE MEASURE COST	0.	1.505	0.344	0.230	0.220	0.197	0.174	2.670
AVERAGE ANNUAL NET COST		0.445						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.014	COHORT1 2.416	COHORT2 2.196	COHORT3 1.996	COHORT4 1.815	COHORT5 1.650	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 6. 100.00 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.444	0.849	0.793	0.736	0.680	0.623	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.406	103.001	103.057	103.114	103.170	103.227	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.566	0.566	0.566	0.566	0.566	
(-) DEPRECIATION	0.	0.	0.566	0.831	0.793	0.793	0.793	
TAXABLE INCOME	103.850	101.350	103.001	102.793	102.887	102.944	103.001	
GROSS TAX	27.521	26.371	27.130	27.035	27.078	27.104	27.130	
INVESTMENT TAX CREDIT	0.	0.378	0.	0.	0.	0.	0.	
NET TAXES	27.521	25.993	27.130	27.035	27.078	27.104	27.130	
NET INCOME	76.329	74.413	75.870	76.022	76.036	76.066	76.097	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.444	0.849	0.793	0.736	0.680	0.623	7.125
TAX SAVINGS	0.	1.528	0.391	0.486	0.443	0.417	0.391	3.655
NET COMPLIANCE MEASURE COST	0.	1.916	0.459	0.307	0.293	0.263	0.232	3.470
AVERAGE ANNUAL NET COST		0.578						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.611	COHORT1 3.131	COHORT2 2.846	COHORT3 2.587	COHORT4 2.352	COHORT5 2.138	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 7. 141.25 VOLTS PER METER

LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					TOTAL COSTS
		0	1	2	3	4	5	
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.960	0.414	0.386	0.359	0.331	0.303	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.890	103.436	103.464	103.491	103.519	103.547	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.276	0.276	0.276	0.276	0.276	
(-) DEPRECIATION	0.	0.	0.276	0.405	0.386	0.386	0.386	
TAXABLE INCOME	103.850	102.350	103.436	103.335	103.381	103.409	103.436	
GROSS TAX	27.521	26.831	27.331	27.284	27.305	27.318	27.331	
INVESTMENT TAX CREDIT	0.	0.184	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.647	27.331	27.284	27.305	27.318	27.331	
NET INCOME	76.329	75.243	76.106	76.180	76.186	76.201	76.216	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	1.960	0.414	0.386	0.359	0.331	0.303	3.753
TAX SAVINGS	0.	0.874	0.190	0.237	0.216	0.203	0.190	1.910
NET COMPLIANCE MEASURE COST	0.	1.086	0.223	0.149	0.143	0.128	0.113	1.843
AVERAGE ANNUAL NET COST		0.307						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.399	COHORT1 1.678	COHORT2 1.525	COHORT3 1.386	COHORT4 1.260	COHORT5 1.146	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 7. 141.25 VOLTS PER METER MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.690	0.621	0.579	0.538	0.497	0.455	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.160	103.229	103.271	103.312	103.353	103.395	
TAX PURPOSE ADJUSTMENT TO								
(+) AMORTIZATION	0.	0.	0.414	0.414	0.414	0.414	0.414	
(-) DEPRECIATION	0.	0.	0.414	0.607	0.579	0.579	0.579	
TAXABLE INCOME	103.850	101.850	103.229	103.077	103.146	103.188	103.229	
GROSS TAX	27.521	26.601	27.235	27.166	27.197	27.216	27.235	
INVESTMENT TAX CREDIT	0.	0.276	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.325	27.235	27.166	27.197	27.216	27.235	
NET INCOME	76.329	74.835	75.994	76.105	76.115	76.137	76.159	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	2.690	0.621	0.579	0.538	0.497	0.455	5.380
TAX SAVINGS	0.	1.196	0.286	0.355	0.324	0.305	0.286	2.751
NET COMPLIANCE MEASURE COST	0.	1.494	0.335	0.224	0.214	0.192	0.170	2.629
AVERAGE ANNUAL NET COST		0.438						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.986	COHORT1 2.381	COHORT2 2.165	COHORT3 1.968	COHORT4 1.789	COHORT5 1.627	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 7. 141.25 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.420	0.828	0.773	0.717	0.662	0.607	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.430	103.022	103.077	103.133	103.188	103.243	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.552	0.552	0.552	0.552	0.552	
(-) DEPRECIATION	0.	0.	0.552	0.809	0.773	0.773	0.773	
TAXABLE INCOME	103.850	101.350	103.022	102.820	102.912	102.967	103.022	
GROSS TAX	27.521	26.371	27.140	27.047	27.089	27.115	27.140	
INVESTMENT TAX CREDIT	0.	0.368	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.003	27.140	27.047	27.089	27.115	27.140	
NET INCOME	76.329	74.427	75.882	76.030	76.043	76.073	76.103	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.420	0.828	0.773	0.717	0.662	0.607	7.007
TAX SAVINGS	0.	1.518	0.381	0.474	0.432	0.406	0.381	3.591
NET COMPLIANCE MEASURE COST	0.	1.902	0.447	0.299	0.286	0.256	0.226	3.416
AVERAGE ANNUAL NET COST		0.569						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.573	COHORT1 3.085	COHORT2 2.805	COHORT3 2.550	COHORT4 2.318	COHORT5 2.107	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 8. 173.18 VOLTS PER METER

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	LOW COST TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.916	0.375	0.350	0.325	0.300	0.275	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.934	103.475	103.500	103.525	103.550	103.575	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.250	0.250	0.250	0.250	0.250	
(-) DEPRECIATION	0.	0.	0.250	0.366	0.350	0.350	0.350	
TAXABLE INCOME	103.850	102.350	103.475	103.384	103.425	103.450	103.475	
GROSS TAX	27.521	26.831	27.349	27.306	27.326	27.337	27.349	
INVESTMENT TAX CREDIT	0.	0.167	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.664	27.349	27.306	27.326	27.337	27.349	
NET INCOME	76.329	75.269	76.127	76.194	76.200	76.213	76.227	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.916	0.375	0.350	0.325	0.300	0.275	3.541
TAX SAVINGS	0.	0.857	0.172	0.215	0.195	0.184	0.172	1.795
NET COMPLIANCE MEASURE COST	0.	1.060	0.202	0.135	0.129	0.116	0.102	1.745
AVERAGE ANNUAL NET COST		0.291						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.331	COHORT1 1.596	COHORT2 1.451	COHORT3 1.319	COHORT4 1.199	COHORT5 1.090	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 8. 173.18 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.625	0.562	0.525	0.487	0.450	0.412	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.225	103.288	103.325	103.363	103.400	103.438	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.375	0.375	0.375	0.375	0.375	
(-) DEPRECIATION	0.	0.	0.375	0.550	0.525	0.525	0.525	
TAXABLE INCOME	103.850	101.850	103.288	103.150	103.213	103.250	103.288	
GROSS TAX	27.521	26.601	27.262	27.199	27.228	27.245	27.262	
INVESTMENT TAX CREDIT	0.	0.250	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.351	27.262	27.199	27.228	27.245	27.262	
NET INCOME	76.329	74.874	76.025	76.126	76.135	76.155	76.175	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.625	0.562	0.525	0.487	0.450	0.412	5.061
TAX SAVINGS	0.	1.170	0.259	0.322	0.293	0.276	0.259	2.578
NET COMPLIANCE MEASURE COST	0.	1.455	0.304	0.203	0.194	0.174	0.154	2.483
AVERAGE ANNUAL NET COST		0.414						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.884	COHORT1 2.259	COHORT2 2.053	COHORT3 1.867	COHORT4 1.697	COHORT5 1.543	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 8. 173.18 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.333	0.750	0.700	0.650	0.600	0.550	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.517	103.100	103.150	103.200	103.250	103.300	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.500	0.500	0.500	0.500	0.500	
(-) DEPRECIATION	0.	0.	0.500	0.733	0.700	0.700	0.700	
TAXABLE INCOME	103.850	101.350	103.100	102.917	103.000	103.050	103.100	
GROSS TAX	27.521	26.371	27.176	27.092	27.130	27.153	27.176	
INVESTMENT TAX CREDIT	0.	0.333	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.038	27.176	27.092	27.130	27.153	27.176	
NET INCOME	76.329	74.479	75.924	76.058	76.070	76.097	76.124	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.333	0.750	0.700	0.650	0.600	0.550	6.581
TAX SAVINGS	0.	1.483	0.345	0.429	0.391	0.368	0.345	3.361
NET COMPLIANCE MEASURE COST	0.	1.850	0.405	0.271	0.259	0.232	0.205	3.221
AVERAGE ANNUAL NET COST		0.537						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.436	COHORT1 2.921	COHORT2 2.656	COHORT3 2.414	COHORT4 2.195	COHORT5 1.995	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 9. 200.00 VOLTS PER METER LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.910	0.369	0.344	0.320	0.295	0.270	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.940	103.481	103.506	103.530	103.555	103.580	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.246	0.246	0.246	0.246	0.246	
(-) DEPRECIATION	0.	0.	0.246	0.361	0.344	0.344	0.344	
TAXABLE INCOME	103.850	102.350	103.481	103.391	103.432	103.457	103.481	
GROSS TAX	27.521	26.831	27.351	27.310	27.329	27.340	27.351	
INVESTMENT TAX CREDIT	0.	0.164	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.667	27.351	27.310	27.329	27.340	27.351	
NET INCOME	76.329	75.273	76.130	76.196	76.202	76.215	76.228	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.910	0.369	0.344	0.320	0.295	0.270	3.508
TAX SAVINGS	0.	0.854	0.170	0.211	0.192	0.181	0.170	1.777
NET COMPLIANCE MEASURE COST	0.	1.056	0.199	0.133	0.127	0.114	0.101	1.730
AVERAGE ANNUAL NET COST		0.288						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.320	COHORT1 1.583	COHORT2 1.439	COHORT3 1.308	COHORT4 1.189	COHORT5 1.081	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 9. 200.00 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.615	0.553	0.516	0.479	0.442	0.406	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.235	103.297	103.334	103.371	103.408	103.444	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.369	0.369	0.369	0.369	0.369	
(-) DEPRECIATION	0.	0.	0.369	0.541	0.516	0.516	0.516	
TAXABLE INCOME	103.850	101.850	103.297	103.162	103.223	103.260	103.297	
GROSS TAX	27.521	26.601	27.267	27.204	27.233	27.250	27.267	
INVESTMENT TAX CREDIT	0.	0.246	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.355	27.267	27.204	27.233	27.250	27.267	
NET INCOME	76.329	74.880	76.030	76.129	76.138	76.158	76.178	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.615	0.553	0.516	0.479	0.442	0.406	5.011
TAX SAVINGS	0.	1.166	0.254	0.317	0.288	0.271	0.254	2.551
NET COMPLIANCE MEASURE COST	0.	1.449	0.299	0.200	0.191	0.171	0.151	2.460
AVERAGE ANNUAL NET COST		0.410						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.868	COHORT1 2.239	COHORT2 2.036	COHORT3 1.851	COHORT4 1.683	COHORT5 1.530	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 9. 200.00 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.319	0.737	0.688	0.639	0.590	0.541	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.531	103.113	103.162	103.211	103.260	103.309	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.492	0.492	0.492	0.492	0.492	
(-) DEPRECIATION	0.	0.	0.492	0.721	0.688	0.688	0.688	
TAXABLE INCOME	103.850	101.350	103.113	102.932	103.014	103.063	103.113	
GROSS TAX	27.521	26.371	27.182	27.099	27.137	27.159	27.182	
INVESTMENT TAX CREDIT	0.	0.328	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.043	27.182	27.099	27.137	27.159	27.182	
NET INCOME	76.329	74.487	75.931	76.063	76.074	76.101	76.127	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.319	0.737	0.688	0.639	0.590	0.541	6.515
TAX SAVINGS	0.	1.478	0.339	0.422	0.384	0.362	0.339	3.325
NET COMPLIANCE MEASURE COST	0.	1.842	0.398	0.266	0.255	0.228	0.202	3.190
AVERAGE ANNUAL NET COST		0.532						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.415	COHORT1 2.896	COHORT2 2.633	COHORT3 2.393	COHORT4 2.176	COHORT5 1.978	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 10. 223.87 VOLTS PER METER LOW COST

TIME PERIOD

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.919	0.377	0.352	0.327	0.302	0.277	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.931	103.473	103.498	103.523	103.548	103.573	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.252	0.252	0.252	0.252	0.252	
(-) DEPRECIATION	0.	0.	0.252	0.369	0.352	0.352	0.352	
TAXABLE INCOME	103.850	102.350	103.473	103.381	103.422	103.448	103.473	
GROSS TAX	27.521	26.831	27.347	27.305	27.324	27.336	27.347	
INVESTMENT TAX CREDIT	0.	0.168	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.663	27.347	27.305	27.324	27.336	27.347	
NET INCOME	76.329	75.267	76.125	76.193	76.199	76.212	76.226	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.919	0.377	0.352	0.327	0.302	0.277	3.554
TAX SAVINGS	0.	0.858	0.174	0.216	0.197	0.185	0.174	1.803
NET COMPLIANCE MEASURE COST	0.	1.062	0.204	0.136	0.130	0.117	0.103	1.751
AVERAGE ANNUAL NET COST		0.292						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.335	COHORT1 1.601	COHORT2 1.455	COHORT3 1.323	COHORT4 1.203	COHORT5 1.093	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 10. 223.87 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.629	0.566	0.528	0.490	0.453	0.415	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.221	103.284	103.322	103.360	103.397	103.435	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.377	0.377	0.377	0.377	0.377	
(-) DEPRECIATION	0.	0.	0.377	0.553	0.528	0.528	0.528	
TAXABLE INCOME	103.850	101.850	103.284	103.146	103.209	103.246	103.284	
GROSS TAX	27.521	26.601	27.261	27.197	27.226	27.243	27.261	
INVESTMENT TAX CREDIT	0.	0.252	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.349	27.261	27.197	27.226	27.243	27.261	
NET INCOME	76.329	74.872	76.023	76.125	76.134	76.154	76.174	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.629	0.566	0.528	0.490	0.453	0.415	5.081
TAX SAVINGS	0.	1.172	0.260	0.324	0.295	0.278	0.260	2.589
NET COMPLIANCE MEASURE COST	0.	1.457	0.306	0.204	0.195	0.175	0.155	2.492
AVERAGE ANNUAL NET COST		0.415						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.890	COHORT1 2.266	COHORT2 2.060	COHORT3 1.873	COHORT4 1.703	COHORT5 1.548	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 10. 223.87 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.629	0.566	0.528	0.490	0.453	0.415	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.221	103.284	103.322	103.360	103.397	103.435	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.377	0.377	0.377	0.377	0.377	
(-) DEPRECIATION	0.	0.	0.377	0.553	0.528	0.528	0.528	
TAXABLE INCOME	103.850	101.850	103.284	103.146	103.209	103.246	103.284	
GROSS TAX	27.521	26.601	27.261	27.197	27.226	27.243	27.261	
INVESTMENT TAX CREDIT	0.	0.252	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.349	27.261	27.197	27.226	27.243	27.261	
NET INCOME	76.329	74.872	76.023	76.125	76.134	76.154	76.174	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.629	0.566	0.528	0.490	0.453	0.415	5.081
TAX SAVINGS	0.	1.172	0.260	0.324	0.295	0.278	0.260	2.589
NET COMPLIANCE MEASURE COST	0.	1.457	0.306	0.204	0.195	0.175	0.155	2.492
AVERAGE ANNUAL NET COST		0.415						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.890	COHORT1 2.266	COHORT2 2.060	COHORT3 1.873	COHORT4 1.703	COHORT5 1.548	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 10. 223.87 VOLTS PER METER HIGH COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.338	0.755	0.704	0.654	0.604	0.553	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.512	103.095	103.146	103.196	103.246	103.297	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.503	0.503	0.503	0.503	0.503	
(-) DEPRECIATION	0.	0.	0.503	0.738	0.704	0.704	0.704	
TAXABLE INCOME	103.850	101.350	103.095	102.911	102.995	103.045	103.095	
GROSS TAX	27.521	26.371	27.174	27.089	27.128	27.151	27.174	
INVESTMENT TAX CREDIT	0.	0.335	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.036	27.174	27.089	27.128	27.151	27.174	
NET INCOME	76.329	74.476	75.922	76.057	76.068	76.096	76.123	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.338	0.755	0.704	0.654	0.604	0.553	6.608
TAX SAVINGS	0.	1.485	0.347	0.432	0.393	0.370	0.347	3.375
NET COMPLIANCE MEASURE COST	0.	1.853	0.407	0.272	0.261	0.233	0.206	3.233
AVERAGE ANNUAL NET COST		0.539						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.445	COHORT1 2.932	COHORT2 2.665	COHORT3 2.423	COHORT4 2.203	COHORT5 2.002	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 11. 244.91 VOLTS PER METER LOW COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.912	0.371	0.346	0.321	0.297	0.272	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.938	103.479	103.504	103.529	103.553	103.578	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.247	0.247	0.247	0.247	0.247	
(-) DEPRECIATION	0.	0.	0.247	0.362	0.346	0.346	0.346	
TAXABLE INCOME	103.850	102.350	103.479	103.389	103.430	103.455	103.479	
GROSS TAX	27.521	26.831	27.350	27.309	27.328	27.339	27.350	
INVESTMENT TAX CREDIT	0.	0.165	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.666	27.350	27.309	27.328	27.339	27.350	
NET INCOME	76.329	75.272	76.129	76.195	76.201	76.214	76.228	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.912	0.371	0.346	0.321	0.297	0.272	3.518
TAX SAVINGS	0.	0.855	0.171	0.212	0.193	0.182	0.171	1.783
NET COMPLIANCE MEASURE COST	0.	1.057	0.200	0.134	0.128	0.115	0.101	1.735
AVERAGE ANNUAL NET COST		0.289						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.324	COHORT1 1.587	COHORT2 1.443	COHORT3 1.312	COHORT4 1.192	COHORT5 1.084	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 11. 244.91 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.618	0.556	0.519	0.482	0.445	0.408	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.232	103.294	103.331	103.368	103.405	103.442	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.371	0.371	0.371	0.371	0.371	
(-) DEPRECIATION	0.	0.	0.371	0.544	0.519	0.519	0.519	
TAXABLE INCOME	103.850	101.850	103.294	103.158	103.220	103.257	103.294	
GROSS TAX	27.521	26.601	27.265	27.203	27.231	27.248	27.265	
INVESTMENT TAX CREDIT	0.	0.247	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.354	27.265	27.203	27.231	27.248	27.265	
NET INCOME	76.329	74.878	76.029	76.128	76.137	76.157	76.177	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.618	0.556	0.519	0.482	0.445	0.408	5.027
TAX SAVINGS	0.	1.167	0.256	0.318	0.290	0.273	0.256	2.560
NET COMPLIANCE MEASURE COST	0.	1.451	0.300	0.201	0.192	0.172	0.152	2.468
AVERAGE ANNUAL NET COST		0.411						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.873	COHORT1 2.246	COHORT2 2.041	COHORT3 1.856	COHORT4 1.687	COHORT5 1.534	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 11. 244.91 VOLTS PER METER HIGH COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.324	0.741	0.692	0.643	0.593	0.544	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.526	103.109	103.158	103.207	103.257	103.306	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.494	0.494	0.494	0.494	0.494	
(-) DEPRECIATION	0.	0.	0.494	0.725	0.692	0.692	0.692	
TAXABLE INCOME	103.850	101.350	103.109	102.927	103.010	103.059	103.109	
GROSS TAX	27.521	26.371	27.180	27.097	27.134	27.157	27.180	
INVESTMENT TAX CREDIT	0.	0.330	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.041	27.180	27.097	27.134	27.157	27.180	
NET INCOME	76.329	74.485	75.929	76.061	76.073	76.100	76.126	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.324	0.741	0.692	0.643	0.593	0.544	6.536
TAX SAVINGS	0.	1.480	0.341	0.424	0.387	0.364	0.341	3.336
NET COMPLIANCE MEASURE COST	0.	1.844	0.400	0.268	0.256	0.229	0.203	3.200
AVERAGE ANNUAL NET COST		0.533						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.422	COHORT1 2.904	COHORT2 2.640	COHORT3 2.400	COHORT4 2.182	COHORT5 1.984	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 12. 264.55 VOLTS PER METER LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.912	0.371	0.346	0.321	0.296	0.272	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.938	103.479	103.504	103.529	103.554	103.578	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.247	0.247	0.247	0.247	0.247	
(-) DEPRECIATION	0.	0.	0.247	0.362	0.346	0.346	0.346	
TAXABLE INCOME	103.850	102.350	103.479	103.389	103.430	103.455	103.479	
GROSS TAX	27.521	26.831	27.351	27.309	27.328	27.339	27.351	
INVESTMENT TAX CREDIT	0.	0.165	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.666	27.351	27.309	27.328	27.339	27.351	
NET INCOME	76.329	75.272	76.129	76.195	76.201	76.214	76.228	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.912	0.371	0.346	0.321	0.296	0.272	3.518
TAX SAVINGS	0.	0.855	0.170	0.212	0.193	0.182	0.170	1.783
NET COMPLIANCE MEASURE COST	0.	1.057	0.200	0.134	0.128	0.115	0.101	1.735
AVERAGE ANNUAL NET COST		0.289						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.323	COHORT1 1.587	COHORT2 1.443	COHORT3 1.311	COHORT4 1.192	COHORT5 1.084	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 12. 264.55 VOLTS PER METER MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.618	0.556	0.519	0.482	0.445	0.408	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.232	103.294	103.331	103.368	103.405	103.442	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.371	0.371	0.371	0.371	0.371	
(-) DEPRECIATION	0.	0.	0.371	0.544	0.519	0.519	0.519	
TAXABLE INCOME	103.850	101.850	103.294	103.158	103.220	103.257	103.294	
GROSS TAX	27.521	26.601	27.265	27.203	27.231	27.248	27.265	
INVESTMENT TAX CREDIT	0.	0.247	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.354	27.265	27.203	27.231	27.248	27.265	
NET INCOME	76.329	74.878	76.029	76.128	76.137	76.157	76.177	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.618	0.556	0.519	0.482	0.445	0.408	5.026
TAX SAVINGS	0.	1.167	0.256	0.318	0.290	0.273	0.256	2.559
NET COMPLIANCE MEASURE COST	0.	1.451	0.300	0.201	0.192	0.172	0.152	2.467
AVERAGE ANNUAL NET COST		0.411						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.873	COHORT1 2.245	COHORT2 2.041	COHORT3 1.856	COHORT4 1.687	COHORT5 1.534	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 12. 264.55 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.324	0.741	0.692	0.642	0.593	0.544	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.526	103.109	103.158	103.208	103.257	103.306	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.494	0.494	0.494	0.494	0.494	
(-) DEPRECIATION	0.	0.	0.494	0.725	0.692	0.692	0.692	
TAXABLE INCOME	103.850	101.350	103.109	102.928	103.010	103.059	103.109	
GROSS TAX	27.521	26.371	27.180	27.097	27.135	27.157	27.180	
INVESTMENT TAX CREDIT	0.	0.329	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.042	27.180	27.097	27.135	27.157	27.180	
NET INCOME	76.329	74.485	75.929	76.062	76.073	76.100	76.126	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.324	0.741	0.692	0.642	0.593	0.544	6.535
TAX SAVINGS	0.	1.479	0.341	0.424	0.386	0.364	0.341	3.336
NET COMPLIANCE MEASURE COST	0.	1.844	0.400	0.267	0.256	0.229	0.203	3.200
AVERAGE ANNUAL NET COST		0.533						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.422	COHORT1 2.904	COHORT2 2.640	COHORT3 2.400	COHORT4 2.182	COHORT5 1.983	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 13. 281.84 VOLTS PER METER LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.904	0.363	0.339	0.315	0.291	0.266	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.946	103.487	103.511	103.535	103.559	103.584	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.242	0.242	0.242	0.242	0.242	
(-) DEPRECIATION	0.	0.	0.242	0.355	0.339	0.339	0.339	
TAXABLE INCOME	103.850	102.350	103.487	103.398	103.438	103.463	103.487	
GROSS TAX	27.521	26.831	27.354	27.313	27.332	27.343	27.354	
INVESTMENT TAX CREDIT	0.	0.161	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.670	27.354	27.313	27.332	27.343	27.354	
NET INCOME	76.329	75.277	76.133	76.198	76.204	76.217	76.230	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.904	0.363	0.339	0.315	0.291	0.266	3.478
TAX SAVINGS	0.	0.851	0.167	0.208	0.189	0.178	0.167	1.761
NET COMPLIANCE MEASURE COST	0.	1.052	0.196	0.131	0.125	0.112	0.099	1.716
AVERAGE ANNUAL NET COST		0.286						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.311	COHORT1 1.571	COHORT2 1.429	COHORT3 1.299	COHORT4 1.181	COHORT5 1.073	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 13. 281.84 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.605	0.545	0.509	0.472	0.436	0.400	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.245	103.305	103.341	103.378	103.414	103.450	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.363	0.363	0.363	0.363	0.363	
(-) DEPRECIATION	0.	0.	0.363	0.533	0.509	0.509	0.509	
TAXABLE INCOME	103.850	101.850	103.305	103.172	103.232	103.269	103.305	
GROSS TAX	27.521	26.601	27.270	27.209	27.237	27.254	27.270	
INVESTMENT TAX CREDIT	0.	0.242	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.359	27.270	27.209	27.237	27.254	27.270	
NET INCOME	76.329	74.886	76.035	76.132	76.141	76.160	76.180	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	2.605	0.545	0.509	0.472	0.436	0.400	4.967
TAX SAVINGS	0.	1.162	0.251	0.312	0.284	0.267	0.251	2.527
NET COMPLIANCE MEASURE COST	0.	1.443	0.294	0.197	0.188	0.169	0.149	2.440
AVERAGE ANNUAL NET COST		0.407						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.853	COHORT1 2.222	COHORT2 2.020	COHORT3 1.837	COHORT4 1.670	COHORT5 1.518	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 13. 281.84 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.307	0.726	0.678	0.630	0.581	0.533	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.543	103.124	103.172	103.220	103.269	103.317	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.484	0.484	0.484	0.484	0.484	
(-) DEPRECIATION	0.	0.	0.484	0.710	0.678	0.678	0.678	
TAXABLE INCOME	103.850	101.350	103.124	102.946	103.027	103.075	103.124	
GROSS TAX	27.521	26.371	27.187	27.105	27.142	27.165	27.187	
INVESTMENT TAX CREDIT	0.	0.323	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.048	27.187	27.105	27.142	27.165	27.187	
NET INCOME	76.329	74.495	75.937	76.067	76.078	76.104	76.130	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.307	0.726	0.678	0.630	0.581	0.533	6.455
TAX SAVINGS	0.	1.473	0.334	0.416	0.379	0.356	0.334	3.292
NET COMPLIANCE MEASURE COST	0.	1.834	0.392	0.262	0.251	0.225	0.199	3.163
AVERAGE ANNUAL NET COST		0.527						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.396	COHORT1 2.873	COHORT2 2.612	COHORT3 2.374	COHORT4 2.158	COHORT5 1.962	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 14. 300.00 VOLTS PER METER LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.903	0.363	0.339	0.315	0.290	0.266	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.947	103.487	103.511	103.535	103.560	103.584	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.242	0.242	0.242	0.242	0.242	
(-) DEPRECIATION	0.	0.	0.242	0.355	0.339	0.339	0.339	
TAXABLE INCOME	103.850	102.350	103.487	103.398	103.439	103.463	103.487	
GROSS TAX	27.521	26.831	27.354	27.313	27.332	27.343	27.354	
INVESTMENT TAX CREDIT	0.	0.161	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.670	27.354	27.313	27.332	27.343	27.354	
NET INCOME	76.329	75.277	76.133	76.198	76.204	76.217	76.230	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.903	0.363	0.339	0.315	0.290	0.266	3.476
TAX SAVINGS	0.	0.851	0.167	0.208	0.189	0.178	0.167	1.760
NET COMPLIANCE MEASURE COST	0.	1.052	0.196	0.131	0.125	0.112	0.099	1.716
AVERAGE ANNUAL NET COST		0.286						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.310	COHORT1 1.571	COHORT2 1.428	COHORT3 1.298	COHORT4 1.180	COHORT5 1.073	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 14. 300.00 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.605	0.544	0.508	0.472	0.436	0.399	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.245	103.306	103.342	103.378	103.414	103.451	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.363	0.363	0.363	0.363	0.363	
(-) DEPRECIATION	0.	0.	0.363	0.532	0.508	0.508	0.508	
TAXABLE INCOME	103.850	101.850	103.306	103.172	103.233	103.269	103.306	
GROSS TAX	27.521	26.601	27.271	27.209	27.237	27.254	27.271	
INVESTMENT TAX CREDIT	0.	0.242	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.359	27.271	27.209	27.237	27.254	27.271	
NET INCOME	76.329	74.886	76.035	76.133	76.141	76.161	76.180	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.605	0.544	0.508	0.472	0.436	0.399	4.964
TAX SAVINGS	0.	1.162	0.250	0.312	0.284	0.267	0.250	2.526
NET COMPLIANCE MEASURE COST	0.	1.443	0.294	0.196	0.188	0.168	0.149	2.439
AVERAGE ANNUAL NET COST		0.406						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.853	COHORT1 2.221	COHORT2 2.019	COHORT3 1.836	COHORT4 1.669	COHORT5 1.517	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 14. 300.00 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.307	0.726	0.678	0.629	0.581	0.532	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.543	103.124	103.172	103.221	103.269	103.318	
TAX PURPOSE ADJUSTMENT TO								
(+) AMORTIZATION	0.	0.	0.484	0.484	0.484	0.484	0.484	
(-) DEPRECIATION	0.	0.	0.484	0.710	0.678	0.678	0.678	
TAXABLE INCOME	103.850	101.350	103.124	102.947	103.027	103.076	103.124	
GROSS TAX	27.521	26.371	27.187	27.105	27.143	27.165	27.187	
INVESTMENT TAX CREDIT	0.	0.323	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.048	27.187	27.105	27.143	27.165	27.187	
NET INCOME	76.329	74.495	75.937	76.067	76.078	76.104	76.131	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	3.307	0.726	0.678	0.629	0.581	0.532	6.452
TAX SAVINGS	0.	1.473	0.334	0.416	0.378	0.356	0.334	3.291
NET COMPLIANCE MEASURE COST	0.	1.834	0.392	0.262	0.251	0.225	0.198	3.162
AVERAGE ANNUAL NET COST		0.527						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.395	COHORT1 2.872	COHORT2 2.611	COHORT3 2.373	COHORT4 2.158	COHORT5 1.961	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 15. 316.23 VOLTS PER METER LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.903	0.363	0.339	0.314	0.290	0.266	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.947	103.487	103.511	103.536	103.560	103.584	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.242	0.242	0.242	0.242	0.242	
(-) DEPRECIATION	0.	0.	0.242	0.355	0.339	0.339	0.339	
TAXABLE INCOME	103.850	102.350	103.487	103.399	103.439	103.463	103.487	
GROSS TAX	27.521	26.831	27.354	27.313	27.332	27.343	27.354	
INVESTMENT TAX CREDIT	0.	0.161	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.670	27.354	27.313	27.332	27.343	27.354	
NET INCOME	76.329	75.277	76.133	76.198	76.204	76.217	76.230	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.903	0.363	0.339	0.314	0.290	0.266	3.475
TAX SAVINGS	0.	0.851	0.167	0.208	0.189	0.178	0.167	1.760
NET COMPLIANCE MEASURE COST	0.	1.052	0.196	0.131	0.125	0.112	0.099	1.715
AVERAGE ANNUAL NET COST		0.286						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.310	COHORT1 1.570	COHORT2 1.428	COHORT3 1.298	COHORT4 1.180	COHORT5 1.073	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 15. 316.23 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.605	0.544	0.508	0.472	0.435	0.399	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.245	103.306	103.342	103.378	103.415	103.451	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.363	0.363	0.363	0.363	0.363	
(-) DEPRECIATION	0.	0.	0.363	0.532	0.508	0.508	0.508	
TAXABLE INCOME	103.850	101.850	103.306	103.173	103.233	103.270	103.306	
GROSS TAX	27.521	26.601	27.271	27.210	27.237	27.254	27.271	
INVESTMENT TAX CREDIT	0.	0.242	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.359	27.271	27.210	27.237	27.254	27.271	
NET INCOME	76.329	74.886	76.035	76.133	76.141	76.161	76.180	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	2.605	0.544	0.508	0.472	0.435	0.399	4.963
TAX SAVINGS	0.	1.162	0.250	0.311	0.284	0.267	0.250	2.525
NET COMPLIANCE MEASURE COST	0.	1.443	0.294	0.196	0.188	0.168	0.149	2.438
AVERAGE ANNUAL NET COST		0.406						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.852	COHORT1 2.221	COHORT2 2.019	COHORT3 1.835	COHORT4 1.668	COHORT5 1.517	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 15. 316.23 VOLTS PER METER HIGH COST

TIME PERIOD

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.306	0.726	0.677	0.629	0.580	0.532	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.544	103.124	103.173	103.221	103.270	103.318	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.484	0.484	0.484	0.484	0.484	
(-) DEPRECIATION	0.	0.	0.484	0.709	0.677	0.677	0.677	
TAXABLE INCOME	103.850	101.350	103.124	102.947	103.028	103.076	103.124	
GROSS TAX	27.521	26.371	27.187	27.106	27.143	27.165	27.187	
INVESTMENT TAX CREDIT	0.	0.322	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.049	27.187	27.106	27.143	27.165	27.187	
NET INCOME	76.329	74.495	75.937	76.067	76.078	76.105	76.131	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	3.306	0.726	0.677	0.629	0.580	0.532	6.450
TAX SAVINGS	0.	1.472	0.334	0.415	0.378	0.356	0.334	3.289
NET COMPLIANCE MEASURE COST	0.	1.834	0.392	0.262	0.251	0.224	0.198	3.161
AVERAGE ANNUAL NET COST		0.527						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.394	COHORT1 2.871	COHORT2 2.610	COHORT3 2.373	COHORT4 2.157	COHORT5 1.961	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 16. 446.68 VOLTS PER METER LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.898	0.358	0.334	0.310	0.287	0.263	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.952	103.492	103.516	103.540	103.563	103.587	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.239	0.239	0.239	0.239	0.239	
(-) DEPRECIATION	0.	0.	0.239	0.350	0.334	0.334	0.334	
TAXABLE INCOME	103.850	102.350	103.492	103.404	103.444	103.468	103.492	
GROSS TAX	27.521	26.831	27.356	27.316	27.334	27.345	27.356	
INVESTMENT TAX CREDIT	0.	0.159	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.672	27.356	27.316	27.334	27.345	27.356	
NET INCOME	76.329	75.280	76.136	76.200	76.205	76.218	76.231	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.898	0.358	0.334	0.310	0.287	0.263	3.451
TAX SAVINGS	0.	0.849	0.165	0.205	0.187	0.176	0.165	1.746
NET COMPLIANCE MEASURE COST	0.	1.049	0.193	0.129	0.124	0.111	0.098	1.704
AVERAGE ANNUAL NET COST		0.284						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.302	COHORT1 1.561	COHORT2 1.419	COHORT3 1.290	COHORT4 1.173	COHORT5 1.066	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 16. 446.68 VOLTS PER METER MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.597	0.537	0.502	0.466	0.430	0.394	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.253	103.313	103.348	103.384	103.420	103.456	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.358	0.358	0.358	0.358	0.358	
(-) DEPRECIATION	0.	0.	0.358	0.525	0.502	0.502	0.502	
TAXABLE INCOME	103.850	101.850	103.313	103.181	103.241	103.277	103.313	
GROSS TAX	27.521	26.601	27.274	27.213	27.241	27.257	27.274	
INVESTMENT TAX CREDIT	0.	0.239	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.362	27.274	27.213	27.241	27.257	27.274	
NET INCOME	76.329	74.891	76.039	76.135	76.143	76.163	76.182	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.597	0.537	0.502	0.466	0.430	0.394	4.926
TAX SAVINGS	0.	1.159	0.247	0.308	0.280	0.264	0.247	2.505
NET COMPLIANCE MEASURE COST	0.	1.438	0.290	0.194	0.186	0.166	0.147	2.421
AVERAGE ANNUAL NET COST		0.404						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.840	COHORT1 2.207	COHORT2 2.006	COHORT3 1.824	COHORT4 1.658	COHORT5 1.507	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 16. 446.68 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.296	0.717	0.669	0.621	0.573	0.525	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.554	103.133	103.181	103.229	103.277	103.325	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.478	0.478	0.478	0.478	0.478	
(-) DEPRECIATION	0.	0.	0.478	0.701	0.669	0.669	0.669	
TAXABLE INCOME	103.850	101.350	103.133	102.958	103.038	103.086	103.133	
GROSS TAX	27.521	26.371	27.191	27.111	27.147	27.169	27.191	
INVESTMENT TAX CREDIT	0.	0.318	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.053	27.191	27.111	27.147	27.169	27.191	
NET INCOME	76.329	74.501	75.942	76.070	76.082	76.107	76.133	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.296	0.717	0.669	0.621	0.573	0.525	6.401
TAX SAVINGS	0.	1.468	0.330	0.410	0.374	0.352	0.330	3.263
NET COMPLIANCE MEASURE COST	0.	1.828	0.387	0.259	0.247	0.222	0.196	3.138
AVERAGE ANNUAL NET COST		0.523						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.379	COHORT1 2.852	COHORT2 2.593	COHORT3 2.357	COHORT4 2.143	COHORT5 1.948	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 17. 707.95 VOLTS PER METER LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.887	0.348	0.325	0.302	0.278	0.255	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.963	103.502	103.525	103.548	103.572	103.595	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.232	0.232	0.232	0.232	0.232	
(-) DEPRECIATION	0.	0.	0.232	0.340	0.325	0.325	0.325	
TAXABLE INCOME	103.850	102.350	103.502	103.417	103.456	103.479	103.502	
GROSS TAX	27.521	26.831	27.361	27.322	27.340	27.350	27.361	
INVESTMENT TAX CREDIT	0.	0.155	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.676	27.361	27.322	27.340	27.350	27.361	
NET INCOME	76.329	75.287	76.141	76.203	76.209	76.221	76.234	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.887	0.348	0.325	0.302	0.278	0.255	3.394
TAX SAVINGS	0.	0.845	0.160	0.199	0.181	0.171	0.160	1.716
NET COMPLIANCE MEASURE COST	0.	1.042	0.188	0.126	0.120	0.108	0.095	1.678
AVERAGE ANNUAL NET COST		0.280						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.284	COHORT1 1.539	COHORT2 1.399	COHORT3 1.272	COHORT4 1.157	COHORT5 1.051	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 17. 707.95 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.580	0.522	0.487	0.452	0.418	0.383	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.270	103.328	103.363	103.398	103.432	103.467	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.348	0.348	0.348	0.348	0.348	
(-) DEPRECIATION	0.	0.	0.348	0.510	0.487	0.487	0.487	
TAXABLE INCOME	103.850	101.850	103.328	103.201	103.259	103.293	103.328	
GROSS TAX	27.521	26.601	27.281	27.222	27.249	27.265	27.281	
INVESTMENT TAX CREDIT	0.	0.232	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.369	27.281	27.222	27.249	27.265	27.281	
NET INCOME	76.329	74.901	76.047	76.141	76.149	76.168	76.186	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.580	0.522	0.487	0.452	0.418	0.383	4.841
TAX SAVINGS	0.	1.152	0.240	0.299	0.272	0.256	0.240	2.459
NET COMPLIANCE MEASURE COST	0.	1.428	0.282	0.188	0.180	0.161	0.143	2.382
AVERAGE ANNUAL NET COST		0.397						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.813	COHORT1 2.174	COHORT2 1.976	COHORT3 1.797	COHORT4 1.633	COHORT5 1.485	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 17. 707.95 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.273	0.696	0.649	0.603	0.557	0.510	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.577	103.154	103.201	103.247	103.293	103.340	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.464	0.464	0.464	0.464	0.464	
(-) DEPRECIATION	0.	0.	0.464	0.680	0.649	0.649	0.649	
TAXABLE INCOME	103.850	101.350	103.154	102.984	103.061	103.108	103.154	
GROSS TAX	27.521	26.371	27.201	27.123	27.158	27.180	27.201	
INVESTMENT TAX CREDIT	0.	0.309	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.062	27.201	27.123	27.158	27.180	27.201	
NET INCOME	76.329	74.515	75.953	76.078	76.089	76.114	76.139	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.273	0.696	0.649	0.603	0.557	0.510	6.288
TAX SAVINGS	0.	1.459	0.320	0.398	0.363	0.341	0.320	3.202
NET COMPLIANCE MEASURE COST	0.	1.814	0.376	0.251	0.240	0.215	0.190	3.087
AVERAGE ANNUAL NET COST		0.514						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.342	COHORT1 2.809	COHORT2 2.553	COHORT3 2.321	COHORT4 2.110	COHORT5 1.918	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 18. 1000.00 VOLTS PER METER

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	LOW COST TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.887	0.348	0.325	0.302	0.278	0.255	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.963	103.502	103.525	103.548	103.572	103.595	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.232	0.232	0.232	0.232	0.232	
(-) DEPRECIATION	0.	0.	0.232	0.340	0.325	0.325	0.325	
TAXABLE INCOME	103.850	102.350	103.502	103.417	103.456	103.479	103.502	
GROSS TAX	27.521	26.831	27.361	27.322	27.340	27.350	27.361	
INVESTMENT TAX CREDIT	0.	0.155	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.676	27.361	27.322	27.340	27.350	27.361	
NET INCOME	76.329	75.287	76.141	76.203	76.209	76.221	76.234	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.887	0.348	0.325	0.302	0.278	0.255	3.395
TAX SAVINGS	0.	0.845	0.160	0.199	0.181	0.171	0.160	1.716
NET COMPLIANCE MEASURE COST	0.	1.042	0.188	0.126	0.120	0.108	0.095	1.678
AVERAGE ANNUAL NET COST		0.280						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.284	COHORT1 1.540	COHORT2 1.400	COHORT3 1.272	COHORT4 1.157	COHORT5 1.052	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 18. 1000.00 VOLTS PER METER MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.580	0.522	0.487	0.452	0.418	0.383	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	101.270	103.328	103.363	103.398	103.432	103.467	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.348	0.348	0.348	0.348	0.348	
(-) DEPRECIATION	0.	0.	0.348	0.510	0.487	0.487	0.487	
TAXABLE INCOME	103.850	101.850	103.328	103.200	103.258	103.293	103.328	
GROSS TAX	27.521	26.601	27.281	27.222	27.249	27.265	27.281	
INVESTMENT TAX CREDIT	0.	0.232	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.369	27.281	27.222	27.249	27.265	27.281	
NET INCOME	76.329	74.901	76.047	76.141	76.149	76.168	76.186	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	2.580	0.522	0.487	0.452	0.418	0.383	4.842
TAX SAVINGS	0.	1.152	0.240	0.299	0.272	0.256	0.240	2.459
NET COMPLIANCE MEASURE COST	0.	1.428	0.282	0.188	0.180	0.161	0.143	2.383
AVERAGE ANNUAL NET COST		0.397						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.813	COHORT1 2.174	COHORT2 1.977	COHORT3 1.797	COHORT4 1.634	COHORT5 1.485	

TABLE E-3. (CONTINUED)

GUIDANCE LEVEL 18. 1000.00 VOLTS PER METER HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	103.850	103.850	103.850	103.850	103.850	103.850	103.850	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	3.273	0.696	0.650	0.603	0.557	0.510	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	103.850	100.577	103.154	103.200	103.247	103.293	103.340	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.464	0.464	0.464	0.464	0.464	
(-) DEPRECIATION	0.	0.	0.464	0.681	0.650	0.650	0.650	
TAXABLE INCOME	103.850	101.350	103.154	102.984	103.061	103.108	103.154	
GROSS TAX	27.521	26.371	27.201	27.123	27.158	27.179	27.201	
INVESTMENT TAX CREDIT	0.	0.309	0.	0.	0.	0.	0.	
NET TAXES	27.521	26.062	27.201	27.123	27.158	27.179	27.201	
NET INCOME	76.329	74.515	75.953	76.078	76.089	76.114	76.139	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	3.273	0.696	0.650	0.603	0.557	0.510	6.289
TAX SAVINGS	0.	1.459	0.320	0.398	0.363	0.342	0.320	3.202
NET COMPLIANCE MEASURE COST	0.	1.814	0.376	0.251	0.240	0.215	0.190	3.087
AVERAGE ANNUAL NET COST		0.514						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 2.343	COHORT1 2.809	COHORT2 2.554	COHORT3 2.322	COHORT4 2.110	COHORT5 1.919	

TABLE E-4. THE NUMBER OF AM BROADCAST STATIONS REQUIRING MEASURES TO COMPLY WITH GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 18 SPECIFIED GUIDANCE LEVELS AT THREE COST LEVELS.

GUIDANCE LEVEL		LOW COST	MEDIUM COST	HIGH COST
1	10.00 V/M	2311	3081	3928
2	31.62 V/M	2311	3081	3928
3	44.67 V/M	2310	3080	3927
4	70.79 V/M	2273	3030	3864
5	86.60 V/M	2246	2995	3819
6	100.00 V/M	2095	2793	3562
7	141.25 V/M	1856	2475	3156
8	173.18 V/M	1700	2266	2890
9	200.00 V/M	1690	2253	2873
10	223.87 V/M	844	1125	1435
11	244.91 V/M	831	1107	1412
12	264.55 V/M	776	1034	1319
13	281.84 V/M	773	1031	1314
14	300.00 V/M	773	1030	1314
15	316.23 V/M	762	1015	1295
16	446.68 V/M	710	946	1207
17	707.95 V/M	185	247	315
18	1000.00 V/M	87	116	148

APPENDIX F

COST ESTIMATES FOR TV STATIONS

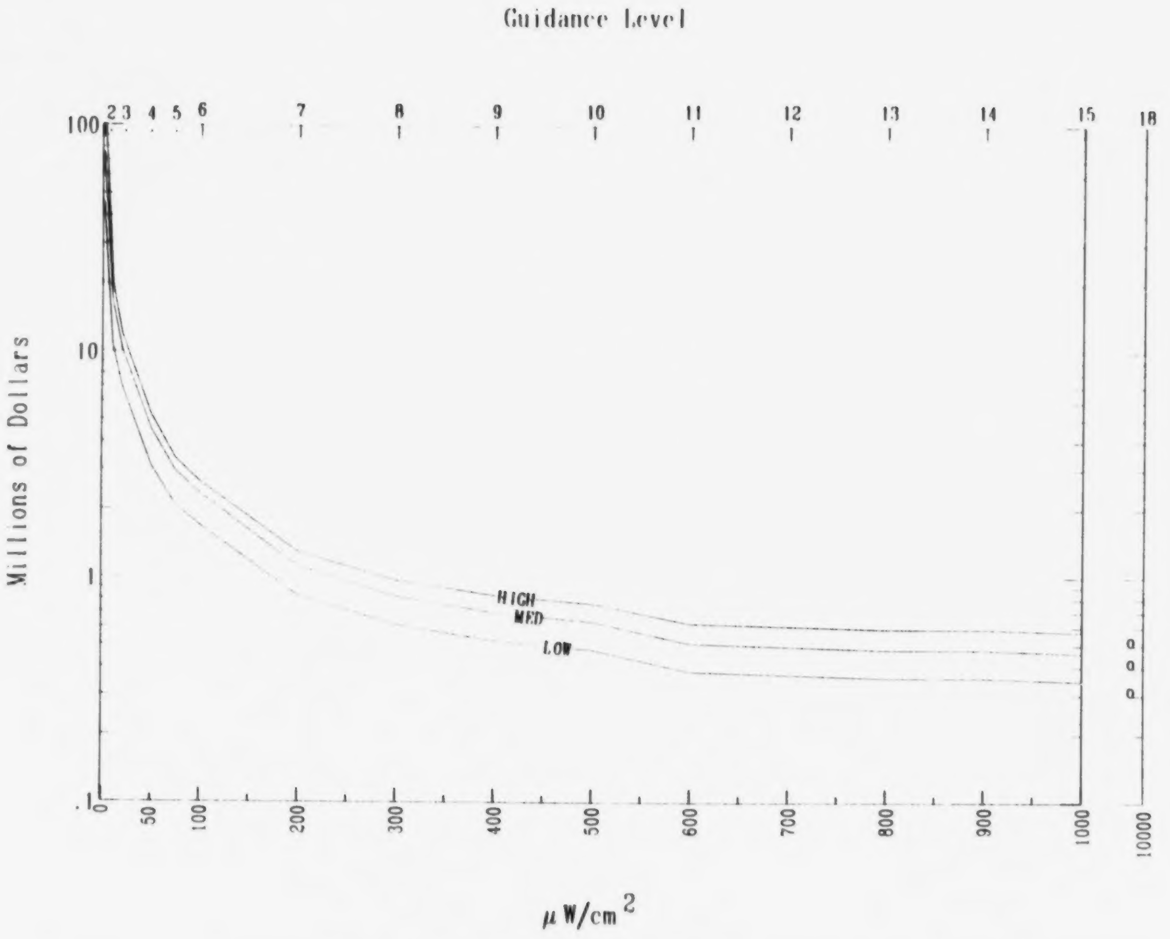

Figure F-1. The annual cash flow (current year dollar) cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from TV broadcast sources is shown for 18 specified guidance levels at three cost levels. It is assumed that compliance costs are spread evenly among five annual cohorts of stations.

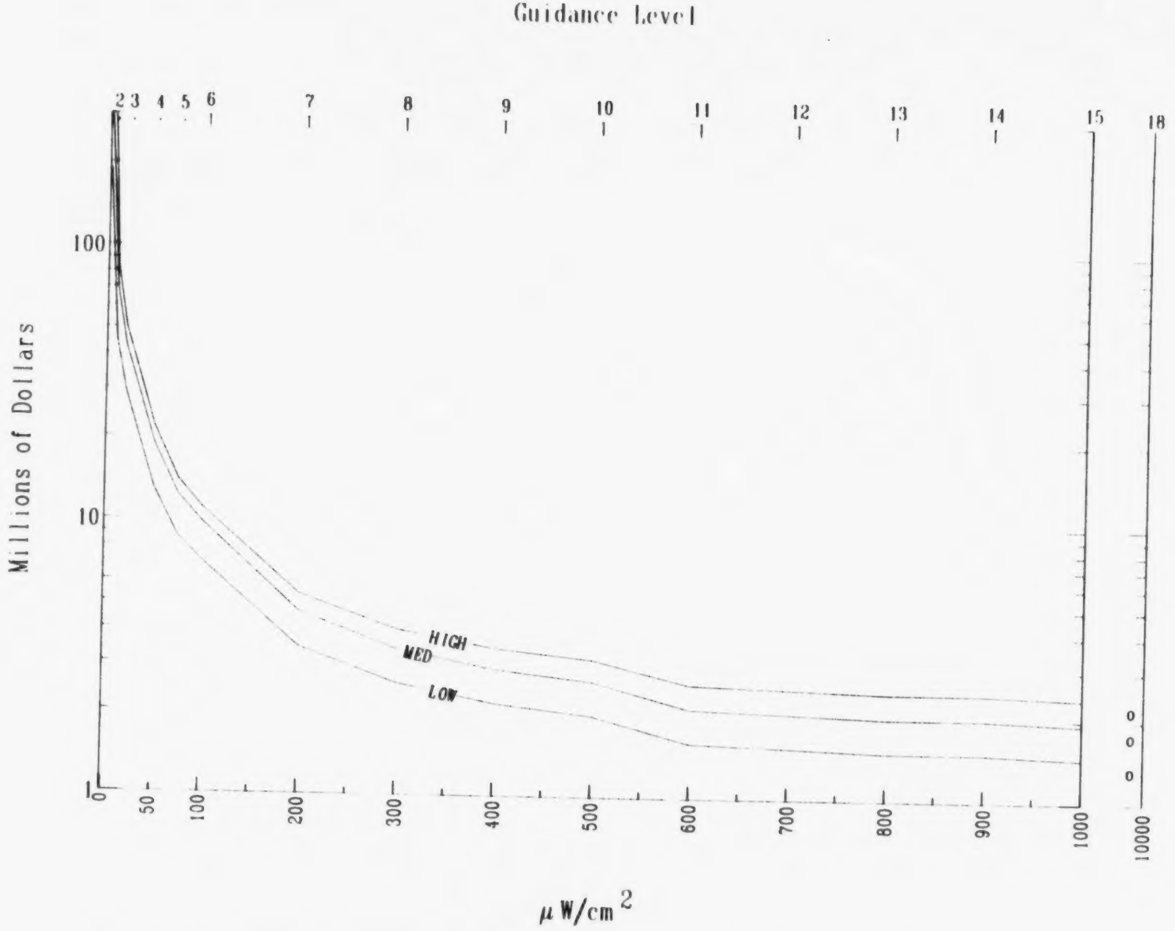

Figure F-2. The present (constant dollar) value of the cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from TV broadcast sources is shown for 18 specified guidance levels at three cost levels.

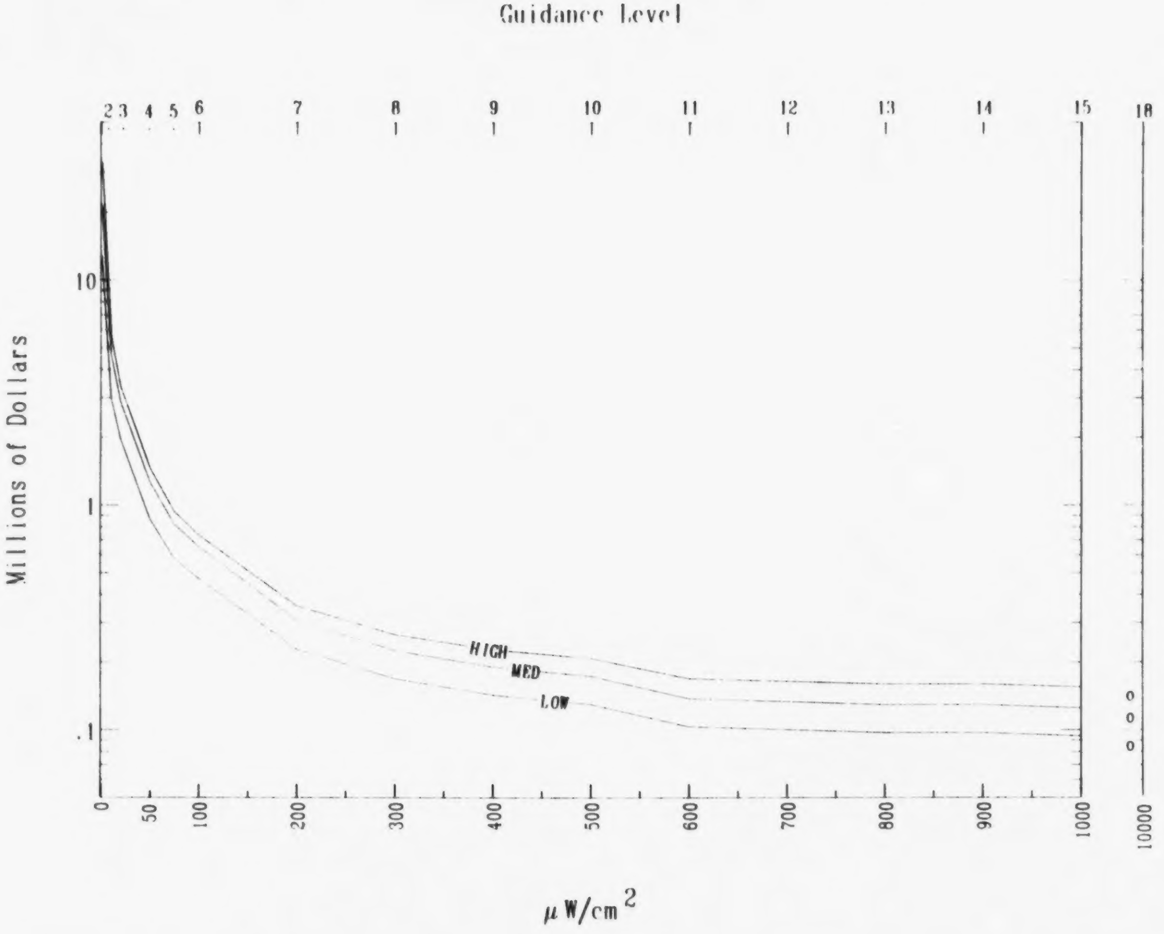

Figure F-3. The average annual net after-tax cash flow (current year dollar) cost to the TV broadcast industry of guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at three cost levels.

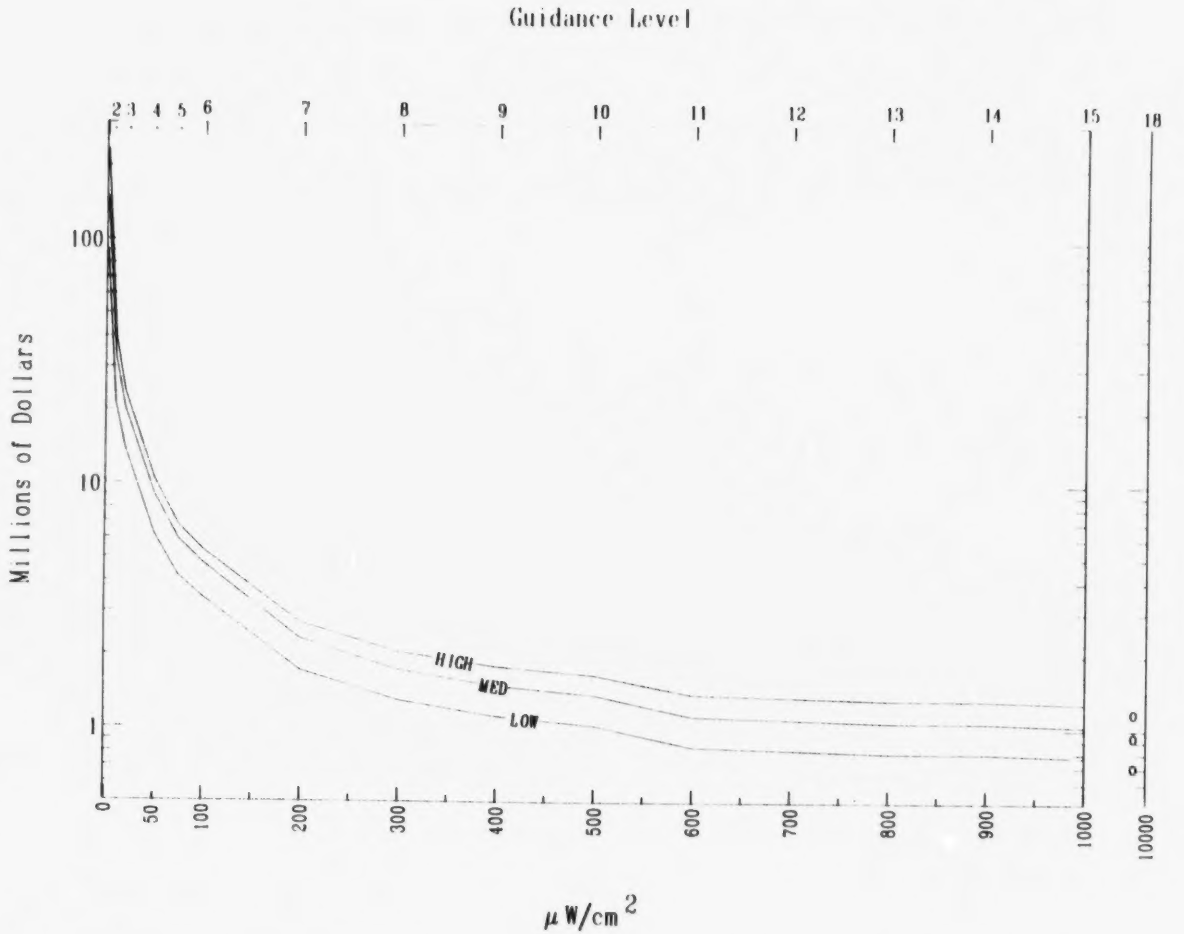

Figure F-4. The present (constant dollar) value of the net after-tax cost to the TV broadcast industry of guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at three cost levels.

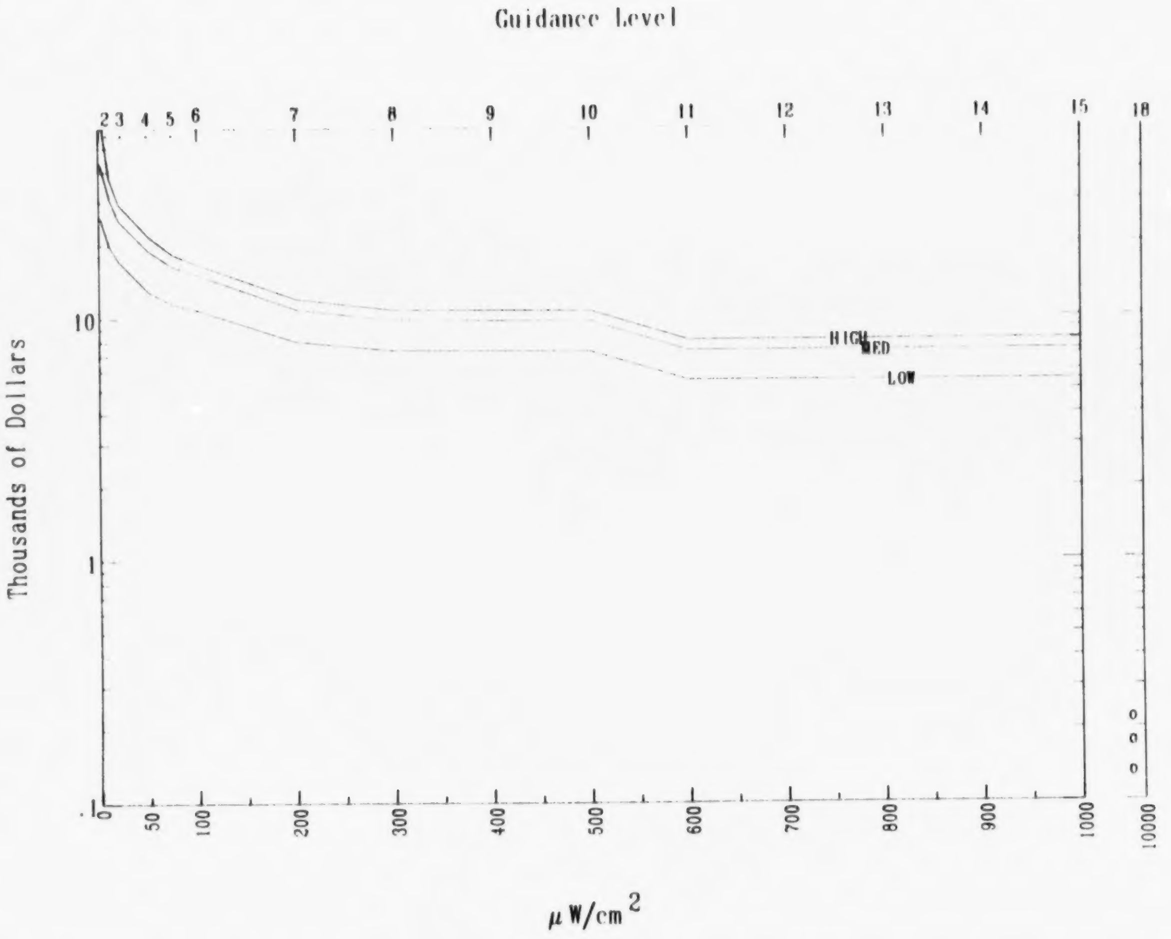

Figure F-5. The average annual net after-tax cash flow (current year dollar) cost of compliance for the average profitable TV broadcast station of guidelines limiting public exposure to radiofrequency radiation is shown for 18 specified guidance levels at three cost levels.

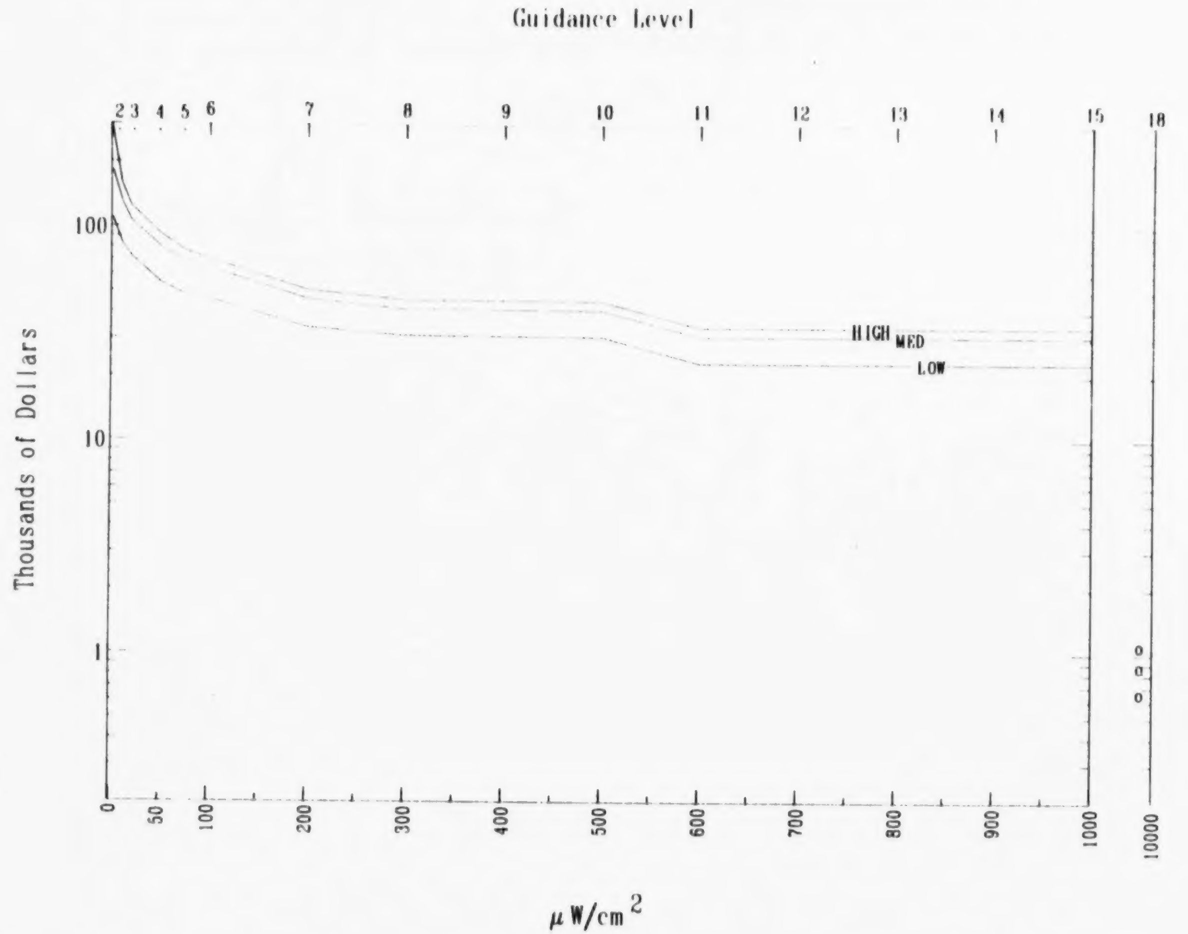

Figure F-6. The average (of 5 cohorts) present (constant dollar) value of the net after-tax cost of compliance for the average profitable TV broadcast station of guidelines limiting public exposure to frequency radiation is shown for 18 specified guidance levels at three cost levels.

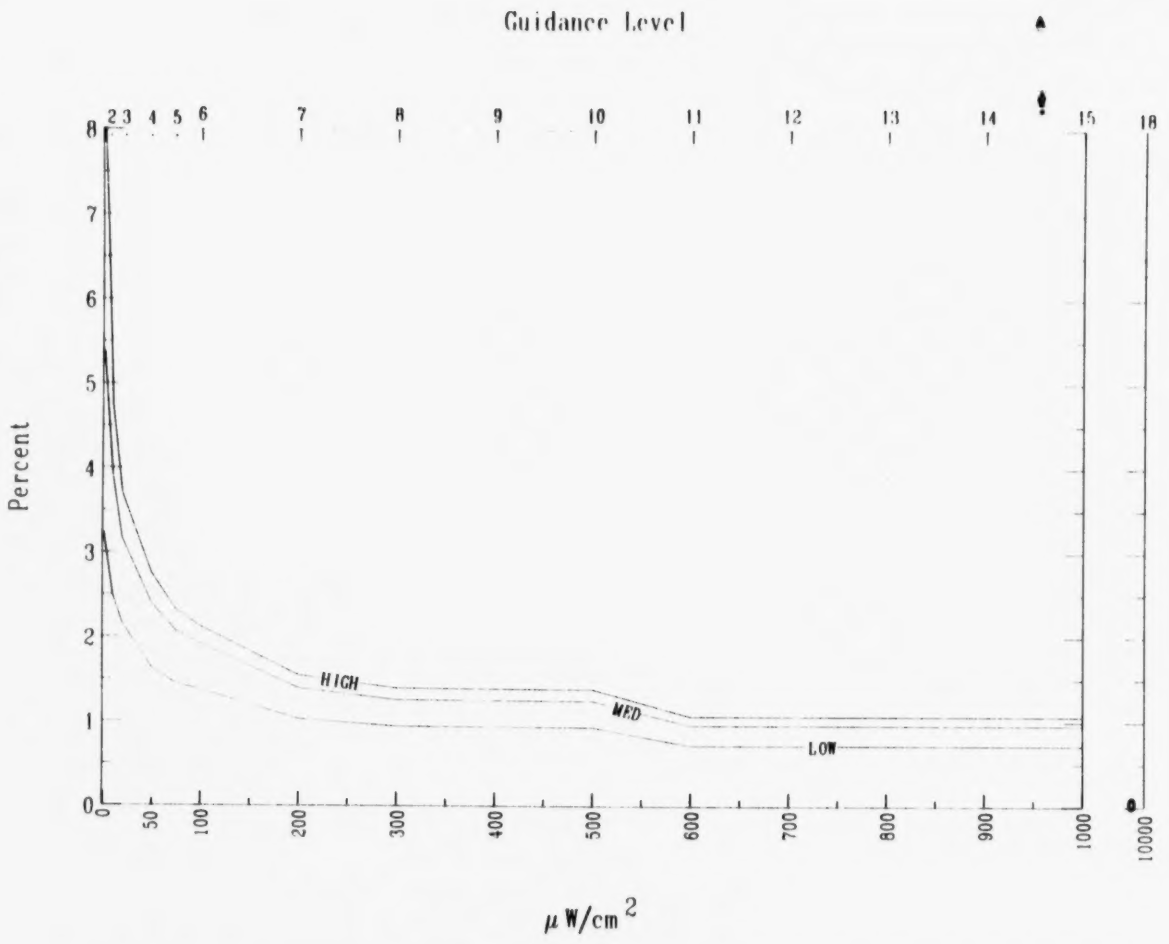

Figure F-7. The percentage reduction in the net profit of the average profitable TV broadcast station associated with the maximum annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 18 guidance levels at 3 cost levels.

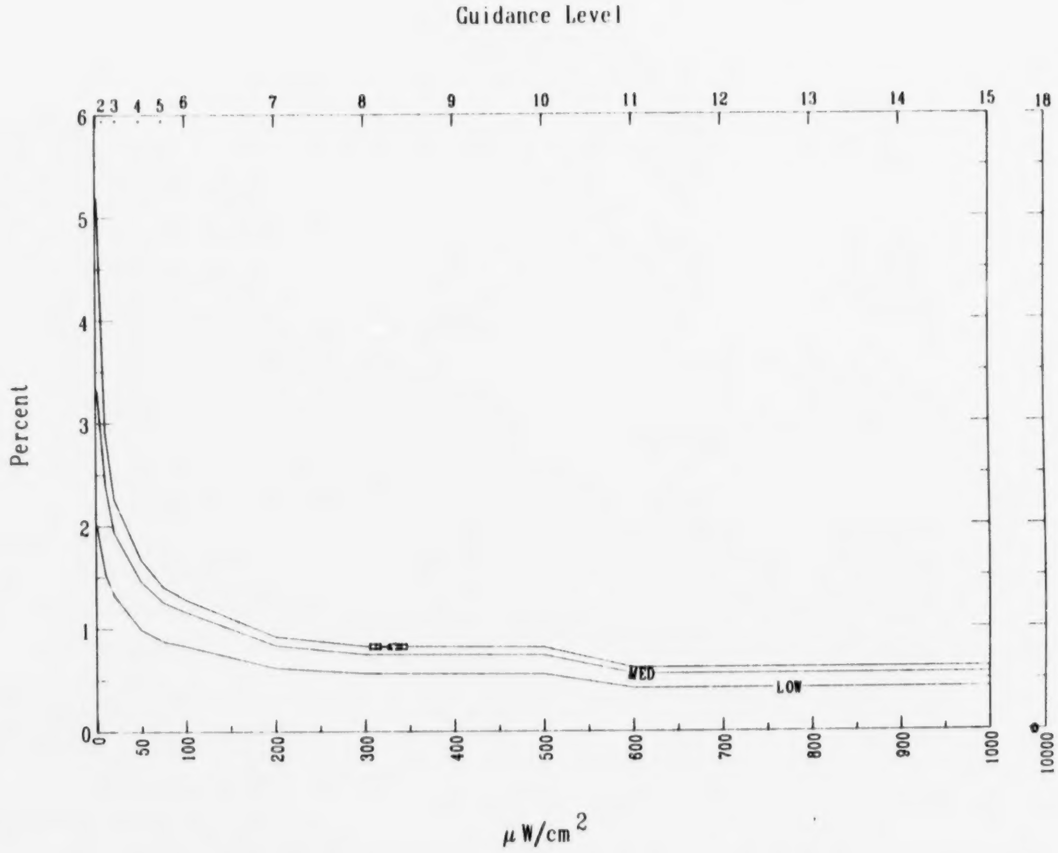

Figure F-8. The percentage reduction in the net profit of the average profitable TV radio broadcast station associated with the average annual cash flow cost of compliance with guidelines limiting public exposure to radiofrequency radiation is shown for 18 guidance levels at 3 cost levels. It is assumed that stations select one of five compliance measures.

TABLE F-1. AN ESTIMATE OF THE POTENTIAL COST TO THE SOCIETY-AT-LARGE OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM TV BROADCAST SOURCES IS GIVEN FOR 3 COST LEVELS. THE GROSS COST, ANNUAL CASH FLOW (CURRENT YEAR DOLLAR) COST AND THE PRESENT (CONSTANT DOLLAR) VALUE ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT COMPLIANCE COSTS (ANNUAL CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN MILLIONS OF DOLLARS.

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
1 1 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	226.393	377.944	591.647
TOTAL GROSS COST	228.013	380.104	594.347
ANNUAL CASH FLOW COST	45.603	76.021	118.869
PRESENT VALUE	190.157	316.997	495.669
2 10 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	52.405	82.424	99.867
TOTAL GROSS COST	54.025	84.584	102.567
ANNUAL CASH FLOW COST	10.805	16.917	20.513
PRESENT VALUE	45.056	70.541	85.539
3 20 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	33.474	49.108	57.330
TOTAL GROSS COST	35.094	51.268	60.030
ANNUAL CASH FLOW COST	7.019	10.254	12.006
PRESENT VALUE	29.267	42.756	50.063
4 50 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	13.950	20.544	23.511
TOTAL GROSS COST	15.570	22.704	26.211
ANNUAL CASH FLOW COST	3.114	4.541	5.242
PRESENT VALUE	12.985	18.935	21.860
5 75 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	8.797	12.610	14.091
TOTAL GROSS COST	10.417	14.770	16.791
ANNUAL CASH FLOW COST	2.083	2.954	3.358
PRESENT VALUE	8.688	12.318	14.003

TABLE F-1. (CONTINUED)

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
6 100 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	6.853	9.586	10.545
TOTAL GROSS COST	8.473	11.746	13.245
ANNUAL CASH FLOW COST	1.695	2.349	2.649
PRESENT VALUE	7.067	9.796	11.046
7 200 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	2.526	3.432	3.775
TOTAL GROSS COST	4.146	5.592	6.475
ANNUAL CASH FLOW COST	0.829	1.118	1.295
PRESENT VALUE	3.458	4.664	5.400
8 300 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	1.461	1.948	2.143
TOTAL GROSS COST	3.081	4.108	4.843
ANNUAL CASH FLOW COST	0.616	0.822	0.969
PRESENT VALUE	2.569	3.426	4.039
9 400 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	0.993	1.324	1.456
TOTAL GROSS COST	2.613	3.484	4.156
ANNUAL CASH FLOW COST	0.523	0.697	0.831
PRESENT VALUE	2.179	2.906	3.466
10 500 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	0.759	1.012	1.113
TOTAL GROSS COST	2.379	3.172	3.813
ANNUAL CASH FLOW COST	0.476	0.634	0.763
PRESENT VALUE	1.984	2.645	3.180

TABLE F-1. (CONTINUED)

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
11 600 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	0.285	0.380	0.418
TOTAL GROSS COST	1.905	2.540	3.118
ANNUAL CASH FLOW COST	0.381	0.508	0.624
PRESENT VALUE	1.589	2.118	2.600
12 700 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	0.228	0.304	0.334
TOTAL GROSS COST	1.848	2.464	3.034
ANNUAL CASH FLOW COST	0.370	0.493	0.607
PRESENT VALUE	1.541	2.055	2.531
13 800 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	0.171	0.228	0.251
TOTAL GROSS COST	1.791	2.388	2.951
ANNUAL CASH FLOW COST	0.358	0.478	0.590
PRESENT VALUE	1.494	1.992	2.461
14 900 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	0.171	0.228	0.251
TOTAL GROSS COST	1.791	2.388	2.951
ANNUAL CASH FLOW COST	0.358	0.478	0.590
PRESENT VALUE	1.494	1.992	2.461
15 1000 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	0.114	0.152	0.167
TOTAL GROSS COST	1.734	2.312	2.867
ANNUAL CASH FLOW COST	0.347	0.462	0.573
PRESENT VALUE	1.446	1.928	2.391

TABLE F-1. (CONTINUED)

GUIDANCE LEVEL	LOW COST	MEDIUM COST	HIGH COST
16 2000 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	0.	0.	0.
TOTAL GROSS COST	1.620	2.160	2.700
ANNUAL CASH FLOW COST	0.324	0.432	0.540
PRESENT VALUE	1.351	1.801	2.252
17 5000 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	0.	0.	0.
TOTAL GROSS COST	1.620	2.160	2.700
ANNUAL CASH FLOW COST	0.324	0.432	0.540
PRESENT VALUE	1.351	1.801	2.252
18 10000 MICROWATTS PER SQ. CM			
COMPLIANCE SURVEY COST	1.620	2.160	2.700
COMPLIANCE MEASURE COST	0.	0.	0.
TOTAL GROSS COST	1.620	2.160	2.700
ANNUAL CASH FLOW COST	0.324	0.432	0.540
PRESENT VALUE	1.351	1.801	2.252

TABLE F-2. AN ESTIMATE OF THE POTENTIAL COST TO THE TV BROADCAST INDUSTRY OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 3 COST LEVELS. THE ANNUAL, AVERAGE AND TOTAL CASH FLOW (CURRENT YEAR DOLLAR) COST AND THE PRESENT (CONSTANT DOLLAR) VALUE OF THE NET AFTER TAX COST ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT COMPLIANCE COSTS (ANNUAL NET CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN MILLIONS OF DOLLARS.

GUIDANCE LEVEL 1. 1 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	6.967	5.501	3.677	3.518	3.151	2.785					
COHORT 2		6.967	5.501	3.677	3.518	3.151	2.785				
COHORT 3			6.967	5.501	3.677	3.518	3.151	2.785			
COHORT 4				6.967	5.501	3.677	3.518	3.151	2.785		
COHORT 5					6.967	5.501	3.677	3.518	3.151	2.785	
ANNUAL CASH FLOW											
PROJECTED	6.967	12.468	16.145	19.663	22.814	18.632	13.131	9.454	5.936	2.785	127.995
AVERAGE	12.799										
PRESENT VALUE	89.783										

MEDIUM COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	11.572	9.184	6.138	5.873	5.261	4.649					
COHORT 2		11.572	9.184	6.138	5.873	5.261	4.649				
COHORT 3			11.572	9.184	6.138	5.873	5.261	4.649			
COHORT 4				11.572	9.184	6.138	5.873	5.261	4.649		
COHORT 5					11.572	9.184	6.138	5.873	5.261	4.649	
ANNUAL CASH FLOW											
PROJECTED	11.572	20.756	26.893	32.767	38.028	31.105	21.921	15.783	9.910	4.649	213.382
AVERAGE	21.338										
PRESENT VALUE	149.639										

HIGH COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	18.041	14.377	9.608	9.194	8.236	7.277					
COHORT 2		18.041	14.377	9.608	9.194	8.236	7.277				
COHORT 3			18.041	14.377	9.608	9.194	8.236	7.277			
COHORT 4				18.041	14.377	9.608	9.194	8.236	7.277		
COHORT 5					18.041	14.377	9.608	9.194	8.236	7.277	
ANNUAL CASH FLOW											
PROJECTED	18.041	32.418	42.026	51.221	59.456	48.693	34.316	24.707	15.513	7.277	333.668
AVERAGE	33.367										
PRESENT VALUE	233.943										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 2. 10 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.747	1.273	0.851	0.814	0.729	0.645					
COHORT 2		1.747	1.273	0.851	0.814	0.729	0.645				
COHORT 3			1.747	1.273	0.851	0.814	0.729	0.645			
COHORT 4				1.747	1.273	0.851	0.814	0.729	0.645		
COHORT 5					1.747	1.273	0.851	0.814	0.729	0.645	
ANNUAL CASH FLOW PROJECTED	1.747	3.021	3.872	4.686	5.416	4.313	3.040	2.188	1.374	0.645	30.300
AVERAGE	3.030										
PRESENT VALUE	21.344										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	2.706	2.003	1.339	1.281	1.147	1.014					
COHORT 2		2.706	2.003	1.339	1.281	1.147	1.014				
COHORT 3			2.706	2.003	1.339	1.281	1.147	1.014			
COHORT 4				2.706	2.003	1.339	1.281	1.147	1.014		
COHORT 5					2.706	2.003	1.339	1.281	1.147	1.014	
ANNUAL CASH FLOW PROJECTED	2.706	4.709	6.047	7.328	8.476	6.783	4.781	3.442	2.161	1.014	47.447
AVERAGE	4.745										
PRESENT VALUE	33.395										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	3.288	2.427	1.622	1.552	1.390	1.228					
COHORT 2		3.288	2.427	1.622	1.552	1.390	1.228				
COHORT 3			3.288	2.427	1.622	1.552	1.390	1.228			
COHORT 4				3.288	2.427	1.622	1.552	1.390	1.228		
COHORT 5					3.288	2.427	1.622	1.552	1.390	1.228	
ANNUAL CASH FLOW PROJECTED	3.288	5.714	7.336	8.888	10.278	8.219	5.792	4.170	2.619	1.228	57.534
AVERAGE	5.753										
PRESENT VALUE	40.499										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 3. 20 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.179	0.813	0.544	0.520	0.466	0.412					
COHORT 2		1.179	0.813	0.544	0.520	0.466	0.412				
COHORT 3			1.179	0.813	0.544	0.520	0.466	0.412			
COHORT 4				1.179	0.813	0.544	0.520	0.466	0.412		
COHORT 5					1.179	0.813	0.544	0.520	0.466	0.412	
ANNUAL CASH FLOW											
PROJECTED	1.179	1.993	2.536	3.056	3.522	2.755	1.941	1.398	0.878	0.412	19.670
AVERAGE	1.967										
PRESENT VALUE	13.897										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	1.707	1.193	0.798	0.763	0.684	0.604					
COHORT 2		1.707	1.193	0.798	0.763	0.684	0.604				
COHORT 3			1.707	1.193	0.798	0.763	0.684	0.604			
COHORT 4				1.707	1.193	0.798	0.763	0.684	0.604		
COHORT 5					1.707	1.193	0.798	0.763	0.684	0.604	
ANNUAL CASH FLOW											
PROJECTED	1.707	2.900	3.697	4.460	5.144	4.042	2.848	2.051	1.288	0.604	28.741
AVERAGE	2.874										
PRESENT VALUE	20.290										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	2.011	1.393	0.931	0.891	0.798	0.705					
COHORT 2		2.011	1.393	0.931	0.891	0.798	0.705				
COHORT 3			2.011	1.393	0.931	0.891	0.798	0.705			
COHORT 4				2.011	1.393	0.931	0.891	0.798	0.705		
COHORT 5					2.011	1.393	0.931	0.891	0.798	0.705	
ANNUAL CASH FLOW											
PROJECTED	2.011	3.405	4.336	5.227	6.025	4.718	3.325	2.394	1.503	0.705	33.649
AVERAGE	3.365										
PRESENT VALUE	23.767										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 4. 50 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.593	0.339	0.227	0.217	0.194	0.172					
COHORT 2		0.593	0.339	0.227	0.217	0.194	0.172				
COHORT 3			0.593	0.339	0.227	0.217	0.194	0.172			
COHORT 4				0.593	0.339	0.227	0.217	0.194	0.172		
COHORT 5					0.593	0.339	0.227	0.217	0.194	0.172	
ANNUAL CASH FLOW											
PROJECTED	0.593	0.932	1.159	1.376	1.570	1.148	0.809	0.583	0.366	0.172	8.708
AVERAGE	0.871										
PRESENT VALUE	6.217										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.850	0.499	0.334	0.319	0.286	0.253					
COHORT 2		0.850	0.499	0.334	0.319	0.286	0.253				
COHORT 3			0.850	0.499	0.334	0.319	0.286	0.253			
COHORT 4				0.850	0.499	0.334	0.319	0.286	0.253		
COHORT 5					0.850	0.499	0.334	0.319	0.286	0.253	
ANNUAL CASH FLOW											
PROJECTED	0.850	1.349	1.682	2.002	2.288	1.691	1.192	0.858	0.539	0.253	12.702
AVERAGE	1.270										
PRESENT VALUE	9.054										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.997	0.571	0.382	0.365	0.327	0.289					
COHORT 2		0.997	0.571	0.382	0.365	0.327	0.289				
COHORT 3			0.997	0.571	0.382	0.365	0.327	0.289			
COHORT 4				0.997	0.571	0.382	0.365	0.327	0.289		
COHORT 5					0.997	0.571	0.382	0.365	0.327	0.289	
ANNUAL CASH FLOW											
PROJECTED	0.997	1.568	1.950	2.315	2.643	1.935	1.364	0.982	0.616	0.289	14.660
AVERAGE	1.466										
PRESENT VALUE	10.464										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 5. 75 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.439	0.214	0.143	0.137	0.122	0.108					
COHORT 2		0.439	0.214	0.143	0.137	0.122	0.108				
COHORT 3			0.439	0.214	0.143	0.137	0.122	0.108			
COHORT 4				0.439	0.214	0.143	0.137	0.122	0.108		
COHORT 5					0.439	0.214	0.143	0.137	0.122	0.108	
ANNUAL CASH FLOW											
PROJECTED	0.439	0.653	0.796	0.932	1.055	0.724	0.510	0.367	0.231	0.108	5.815
AVERAGE	0.581										
PRESENT VALUE	4.190										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.612	0.306	0.205	0.196	0.176	0.155					
COHORT 2		0.612	0.306	0.205	0.196	0.176	0.155				
COHORT 3			0.612	0.306	0.205	0.196	0.176	0.155			
COHORT 4				0.612	0.306	0.205	0.196	0.176	0.155		
COHORT 5					0.612	0.306	0.205	0.196	0.176	0.155	
ANNUAL CASH FLOW											
PROJECTED	0.612	0.918	1.123	1.319	1.494	1.038	0.731	0.527	0.331	0.155	8.247
AVERAGE	0.825										
PRESENT VALUE	5.933										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.714	0.342	0.229	0.219	0.196	0.173					
COHORT 2		0.714	0.342	0.229	0.219	0.196	0.173				
COHORT 3			0.714	0.342	0.229	0.219	0.196	0.173			
COHORT 4				0.714	0.342	0.229	0.219	0.196	0.173		
COHORT 5					0.714	0.342	0.229	0.219	0.196	0.173	
ANNUAL CASH FLOW											
PROJECTED	0.714	1.057	1.286	1.505	1.701	1.160	0.817	0.588	0.369	0.173	9.370
AVERAGE	0.937										
PRESENT VALUE	6.759										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 6. 100 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.381	0.167	0.111	0.107	0.095	0.084					
COHORT 2		0.381	0.167	0.111	0.107	0.095	0.084				
COHORT 3			0.381	0.167	0.111	0.107	0.095	0.084			
COHORT 4				0.381	0.167	0.111	0.107	0.095	0.084		
COHORT 5					0.381	0.167	0.111	0.107	0.095	0.084	
ANNUAL CASH FLOW PROJECTED	0.381	0.547	0.658	0.765	0.860	0.564	0.398	0.286	0.180	0.084	4.723
AVERAGE	0.472										
PRESENT VALUE	3.425										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.521	0.233	0.156	0.149	0.133	0.118					
COHORT 2		0.521	0.233	0.156	0.149	0.133	0.118				
COHORT 3			0.521	0.233	0.156	0.149	0.133	0.118			
COHORT 4				0.521	0.233	0.156	0.149	0.133	0.118		
COHORT 5					0.521	0.233	0.156	0.149	0.133	0.118	
ANNUAL CASH FLOW PROJECTED	0.521	0.754	0.909	1.058	1.192	0.789	0.556	0.400	0.251	0.118	6.549
AVERAGE	0.655										
PRESENT VALUE	4.743										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.608	0.256	0.171	0.164	0.147	0.130					
COHORT 2		0.608	0.256	0.171	0.164	0.147	0.130				
COHORT 3			0.608	0.256	0.171	0.164	0.147	0.130			
COHORT 4				0.608	0.256	0.171	0.164	0.147	0.130		
COHORT 5					0.608	0.256	0.171	0.164	0.147	0.130	
ANNUAL CASH FLOW PROJECTED	0.608	0.864	1.035	1.199	1.346	0.868	0.612	0.440	0.276	0.130	7.379
AVERAGE	0.738										
PRESENT VALUE	5.364										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 7. 200 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.251	0.061	0.041	0.039	0.035	0.031					
COHORT 2		0.251	0.061	0.041	0.039	0.035	0.031				
COHORT 3			0.251	0.061	0.041	0.039	0.035	0.031			
COHORT 4				0.251	0.061	0.041	0.039	0.035	0.031		
COHORT 5					0.251	0.061	0.041	0.039	0.035	0.031	
ANNUAL CASH FLOW											
PROJECTED	0.251	0.312	0.353	0.392	0.428	0.208	0.147	0.105	0.066	0.031	2.293
AVERAGE	0.229										
PRESENT VALUE	1.723										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.336	0.083	0.056	0.053	0.048	0.042					
COHORT 2		0.336	0.083	0.056	0.053	0.048	0.042				
COHORT 3			0.336	0.083	0.056	0.053	0.048	0.042			
COHORT 4				0.336	0.083	0.056	0.053	0.048	0.042		
COHORT 5					0.336	0.083	0.056	0.053	0.048	0.042	
ANNUAL CASH FLOW											
PROJECTED	0.336	0.420	0.475	0.529	0.576	0.282	0.199	0.143	0.090	0.042	3.093
AVERAGE	0.309										
PRESENT VALUE	2.323										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.405	0.092	0.061	0.059	0.053	0.046					
COHORT 2		0.405	0.092	0.061	0.059	0.053	0.046				
COHORT 3			0.405	0.092	0.061	0.059	0.053	0.046			
COHORT 4				0.405	0.092	0.061	0.059	0.053	0.046		
COHORT 5					0.405	0.092	0.061	0.059	0.053	0.046	
ANNUAL CASH FLOW											
PROJECTED	0.405	0.497	0.558	0.617	0.669	0.311	0.219	0.158	0.099	0.046	3.578
AVERAGE	0.358										
PRESENT VALUE	2.701										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 8. 300 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.219	0.036	0.024	0.023	0.020	0.018					
COHORT 2		0.219	0.036	0.024	0.023	0.020	0.018				
COHORT 3			0.219	0.036	0.024	0.023	0.020	0.018			
COHORT 4				0.219	0.036	0.024	0.023	0.020	0.018		
COHORT 5					0.219	0.036	0.024	0.023	0.020	0.018	
ANNUAL CASH FLOW											
PROJECTED	0.219	0.254	0.278	0.301	0.321	0.120	0.085	0.061	0.038	0.018	1.695
AVERAGE	0.170										
PRESENT VALUE	1.304										

MEDIUM COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.292	0.047	0.032	0.030	0.027	0.024					
COHORT 2		0.292	0.047	0.032	0.030	0.027	0.024				
COHORT 3			0.292	0.047	0.032	0.030	0.027	0.024			
COHORT 4				0.292	0.047	0.032	0.030	0.027	0.024		
COHORT 5					0.292	0.047	0.032	0.030	0.027	0.024	
ANNUAL CASH FLOW											
PROJECTED	0.292	0.339	0.371	0.401	0.428	0.160	0.113	0.081	0.051	0.024	2.260
AVERAGE	0.226										
PRESENT VALUE	1.739										

HIGH COST	TIME PERIOD										
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.356	0.052	0.035	0.033	0.030	0.026					
COHORT 2		0.356	0.052	0.035	0.033	0.030	0.026				
COHORT 3			0.356	0.052	0.035	0.033	0.030	0.026			
COHORT 4				0.356	0.052	0.035	0.033	0.030	0.026		
COHORT 5					0.356	0.052	0.035	0.033	0.030	0.026	
ANNUAL CASH FLOW											
PROJECTED	0.356	0.408	0.443	0.476	0.506	0.176	0.124	0.089	0.056	0.026	2.661
AVERAGE	0.266										
PRESENT VALUE	2.059										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 9. 400 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.205	0.024	0.016	0.015	0.014	0.012					
COHORT 2		0.205	0.024	0.016	0.015	0.014	0.012				
COHORT 3			0.205	0.024	0.016	0.015	0.014	0.012			
COHORT 4				0.205	0.024	0.016	0.015	0.014	0.012		
COHORT 5					0.205	0.024	0.016	0.015	0.014	0.012	
ANNUAL CASH FLOW											
PROJECTED	0.205	0.229	0.245	0.260	0.274	0.082	0.058	0.041	0.026	0.012	1.432
AVERAGE	0.143										
PRESENT VALUE	1.120										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.273	0.032	0.022	0.021	0.018	0.016					
COHORT 2		0.273	0.032	0.022	0.021	0.018	0.016				
COHORT 3			0.273	0.032	0.022	0.021	0.018	0.016			
COHORT 4				0.273	0.032	0.022	0.021	0.018	0.016		
COHORT 5					0.273	0.032	0.022	0.021	0.018	0.016	
ANNUAL CASH FLOW											
PROJECTED	0.273	0.305	0.327	0.347	0.366	0.109	0.077	0.055	0.035	0.016	1.910
AVERAGE	0.191										
PRESENT VALUE	1.494										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.335	0.035	0.024	0.023	0.020	0.018					
COHORT 2		0.335	0.035	0.024	0.023	0.020	0.018				
COHORT 3			0.335	0.035	0.024	0.023	0.020	0.018			
COHORT 4				0.335	0.035	0.024	0.023	0.020	0.018		
COHORT 5					0.335	0.035	0.024	0.023	0.020	0.018	
ANNUAL CASH FLOW											
PROJECTED	0.335	0.371	0.394	0.417	0.437	0.120	0.084	0.061	0.038	0.018	2.276
AVERAGE	0.228										
PRESENT VALUE	1.789										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 10. 500 MICROWATTS PER SQ. CM

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.198	0.018	0.012	0.012	0.011	0.009					
COHORT 2		0.198	0.018	0.012	0.012	0.011	0.009				
COHORT 3			0.198	0.018	0.012	0.012	0.011	0.009			
COHORT 4				0.198	0.018	0.012	0.012	0.011	0.009		
COHORT 5					0.198	0.018	0.012	0.012	0.011	0.009	
ANNUAL CASH FLOW											
PROJECTED	0.198	0.216	0.228	0.240	0.251	0.062	0.044	0.032	0.020	0.009	1.301
AVERAGE	0.130										
PRESENT VALUE	1.028										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.264	0.025	0.016	0.016	0.014	0.012					
COHORT 2		0.264	0.025	0.016	0.016	0.014	0.012				
COHORT 3			0.264	0.025	0.016	0.016	0.014	0.012			
COHORT 4				0.264	0.025	0.016	0.016	0.014	0.012		
COHORT 5					0.264	0.025	0.016	0.016	0.014	0.012	
ANNUAL CASH FLOW											
PROJECTED	0.264	0.288	0.305	0.320	0.334	0.083	0.059	0.042	0.027	0.012	1.735
AVERAGE	0.173										
PRESENT VALUE	1.371										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.325	0.027	0.018	0.017	0.015	0.014					
COHORT 2		0.325	0.027	0.018	0.017	0.015	0.014				
COHORT 3			0.325	0.027	0.018	0.017	0.015	0.014			
COHORT 4				0.325	0.027	0.018	0.017	0.015	0.014		
COHORT 5					0.325	0.027	0.018	0.017	0.015	0.014	
ANNUAL CASH FLOW											
PROJECTED	0.325	0.352	0.370	0.387	0.403	0.092	0.065	0.046	0.029	0.014	2.083
AVERAGE	0.208										
PRESENT VALUE	1.654										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 11. 600 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.184	0.007	0.005	0.004	0.004	0.004					
COHORT 2		0.184	0.007	0.005	0.004	0.004	0.004				
COHORT 3			0.184	0.007	0.005	0.004	0.004	0.004			
COHORT 4				0.184	0.007	0.005	0.004	0.004	0.004		
COHORT 5					0.184	0.007	0.005	0.004	0.004	0.004	
ANNUAL CASH FLOW PROJECTED	0.184	0.190	0.195	0.199	0.203	0.023	0.017	0.012	0.007	0.004	1.035
AVERAGE	0.103										
PRESENT VALUE	0.842										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.245	0.009	0.006	0.006	0.005	0.005					
COHORT 2		0.245	0.009	0.006	0.006	0.005	0.005				
COHORT 3			0.245	0.009	0.006	0.006	0.005	0.005			
COHORT 4				0.245	0.009	0.006	0.006	0.005	0.005		
COHORT 5					0.245	0.009	0.006	0.006	0.005	0.005	
ANNUAL CASH FLOW PROJECTED	0.245	0.254	0.260	0.266	0.271	0.031	0.022	0.016	0.010	0.005	1.380
AVERAGE	0.138										
PRESENT VALUE	1.122										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.304	0.010	0.007	0.006	0.006	0.005					
COHORT 2		0.304	0.010	0.007	0.006	0.006	0.005				
COHORT 3			0.304	0.010	0.007	0.006	0.006	0.005			
COHORT 4				0.304	0.010	0.007	0.006	0.006	0.005		
COHORT 5					0.304	0.010	0.007	0.006	0.006	0.005	
ANNUAL CASH FLOW PROJECTED	0.304	0.314	0.321	0.328	0.333	0.034	0.024	0.017	0.011	0.005	1.693
AVERAGE	0.169										
PRESENT VALUE	1.380										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 12. 700 MICROWATTS PER SQ. CM

LOW COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.182	0.006	0.004	0.004	0.003	0.003					
COHORT 2		0.182	0.006	0.004	0.004	0.003	0.003				
COHORT 3			0.182	0.006	0.004	0.004	0.003	0.003			
COHORT 4				0.182	0.006	0.004	0.004	0.003	0.003		
COHORT 5					0.182	0.006	0.004	0.004	0.003	0.003	
ANNUAL CASH FLOW											
PROJECTED	0.182	0.187	0.191	0.195	0.198	0.019	0.013	0.010	0.006	0.003	1.003
AVERAGE	0.100										
PRESENT VALUE	0.819										

MEDIUM COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.242	0.007	0.005	0.005	0.004	0.004					
COHORT 2		0.242	0.007	0.005	0.005	0.004	0.004				
COHORT 3			0.242	0.007	0.005	0.005	0.004	0.004			
COHORT 4				0.242	0.007	0.005	0.005	0.004	0.004		
COHORT 5					0.242	0.007	0.005	0.005	0.004	0.004	
ANNUAL CASH FLOW											
PROJECTED	0.242	0.250	0.255	0.259	0.264	0.025	0.018	0.013	0.008	0.004	1.337
AVERAGE	0.134										
PRESENT VALUE	1.092										

HIGH COST				TIME PERIOD							
	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.302	0.008	0.005	0.005	0.005	0.004					
COHORT 2		0.302	0.008	0.005	0.005	0.005	0.004				
COHORT 3			0.302	0.008	0.005	0.005	0.005	0.004			
COHORT 4				0.302	0.008	0.005	0.005	0.005	0.004		
COHORT 5					0.302	0.008	0.005	0.005	0.005	0.004	
ANNUAL CASH FLOW											
PROJECTED	0.302	0.310	0.315	0.320	0.325	0.028	0.019	0.014	0.009	0.004	1.646
AVERAGE	0.165										
PRESENT VALUE	1.347										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 13. 800 MICROWATTS PER SQ. CM

				TIME PERIOD							
LOW COST	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.180	0.004	0.003	0.003	0.002	0.002					
COHORT 2		0.180	0.004	0.003	0.003	0.002	0.002				
COHORT 3			0.180	0.004	0.003	0.003	0.002	0.002			
COHORT 4				0.180	0.004	0.003	0.003	0.002	0.002		
COHORT 5					0.180	0.004	0.003	0.003	0.002	0.002	
ANNUAL CASH FLOW											
PROJECTED	0.180	0.184	0.187	0.190	0.192	0.014	0.010	0.007	0.004	0.002	0.971
AVERAGE	0.097										
PRESENT VALUE	0.797										

				TIME PERIOD							
MEDIUM COST	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.240	0.006	0.004	0.004	0.003	0.003					
COHORT 2		0.240	0.006	0.004	0.004	0.003	0.003				
COHORT 3			0.240	0.006	0.004	0.004	0.003	0.003			
COHORT 4				0.240	0.006	0.004	0.004	0.003	0.003		
COHORT 5					0.240	0.006	0.004	0.004	0.003	0.003	
ANNUAL CASH FLOW											
PROJECTED	0.240	0.246	0.249	0.253	0.256	0.019	0.013	0.010	0.006	0.003	1.294
AVERAGE	0.129										
PRESENT VALUE	1.062										

				TIME PERIOD							
HIGH COST	0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.299	0.006	0.004	0.004	0.003	0.003					
COHORT 2		0.299	0.006	0.004	0.004	0.003	0.003				
COHORT 3			0.299	0.006	0.004	0.004	0.003	0.003			
COHORT 4				0.299	0.006	0.004	0.004	0.003	0.003		
COHORT 5					0.299	0.006	0.004	0.004	0.003	0.003	
ANNUAL CASH FLOW											
PROJECTED	0.299	0.305	0.309	0.313	0.317	0.021	0.015	0.010	0.007	0.003	1.599
AVERAGE	0.160										
PRESENT VALUE	1.315										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 14. 900 MICROWATTS PER SQ. CM

LOW COST

	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.180	0.004	0.003	0.003	0.002	0.002					
COHORT 2		0.180	0.004	0.003	0.003	0.002	0.002				
COHORT 3			0.180	0.004	0.003	0.003	0.002	0.002			
COHORT 4				0.180	0.004	0.003	0.003	0.002	0.002		
COHORT 5					0.180	0.004	0.003	0.003	0.002	0.002	
ANNUAL CASH FLOW PROJECTED	0.180	0.184	0.187	0.190	0.192	0.014	0.010	0.007	0.004	0.002	0.971
AVERAGE	0.097										
PRESENT VALUE	0.797										

MEDIUM COST

	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.240	0.006	0.004	0.004	0.003	0.003					
COHORT 2		0.240	0.006	0.004	0.004	0.003	0.003				
COHORT 3			0.240	0.006	0.004	0.004	0.003	0.003			
COHORT 4				0.240	0.006	0.004	0.004	0.003	0.003		
COHORT 5					0.240	0.006	0.004	0.004	0.003	0.003	
ANNUAL CASH FLOW PROJECTED	0.240	0.246	0.249	0.253	0.256	0.019	0.013	0.010	0.006	0.003	1.294
AVERAGE	0.129										
PRESENT VALUE	1.062										

HIGH COST

	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.299	0.006	0.004	0.004	0.003	0.003					
COHORT 2		0.299	0.006	0.004	0.004	0.003	0.003				
COHORT 3			0.299	0.006	0.004	0.004	0.003	0.003			
COHORT 4				0.299	0.006	0.004	0.004	0.003	0.003		
COHORT 5					0.299	0.006	0.004	0.004	0.003	0.003	
ANNUAL CASH FLOW PROJECTED	0.299	0.305	0.309	0.313	0.317	0.021	0.015	0.010	0.007	0.003	1.599
AVERAGE	0.160										
PRESENT VALUE	1.315										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 15. 1000 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.178	0.003	0.002	0.002	0.002	0.001					
COHORT 2		0.178	0.003	0.002	0.002	0.002	0.001				
COHORT 3			0.178	0.003	0.002	0.002	0.002	0.001			
COHORT 4				0.178	0.003	0.002	0.002	0.002	0.001		
COHORT 5					0.178	0.003	0.002	0.002	0.002	0.001	
ANNUAL CASH FLOW											
PROJECTED	0.178	0.181	0.183	0.185	0.186	0.009	0.007	0.005	0.003	0.001	0.939
AVERAGE	0.094										
PRESENT VALUE	0.774										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.238	0.004	0.002	0.002	0.002	0.002					
COHORT 2		0.238	0.004	0.002	0.002	0.002	0.002				
COHORT 3			0.238	0.004	0.002	0.002	0.002	0.002			
COHORT 4				0.238	0.004	0.002	0.002	0.002	0.002		
COHORT 5					0.238	0.004	0.002	0.002	0.002	0.002	
ANNUAL CASH FLOW											
PROJECTED	0.238	0.242	0.244	0.246	0.248	0.013	0.009	0.006	0.004	0.002	1.252
AVERAGE	0.125										
PRESENT VALUE	1.033										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.297	0.004	0.003	0.003	0.002	0.002					
COHORT 2		0.297	0.004	0.003	0.003	0.002	0.002				
COHORT 3			0.297	0.004	0.003	0.003	0.002	0.002			
COHORT 4				0.297	0.004	0.003	0.003	0.002	0.002		
COHORT 5					0.297	0.004	0.003	0.003	0.002	0.002	
ANNUAL CASH FLOW											
PROJECTED	0.297	0.301	0.303	0.306	0.308	0.014	0.010	0.007	0.004	0.002	1.552
AVERAGE	0.155										
PRESENT VALUE	1.282										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 16. 2000 MICROWATTS PER SQ. CM

LOW COST

	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.175	0.	0.	0.	0.	0.					
COHORT 2		0.175	0.	0.	0.	0.	0.				
COHORT 3			0.175	0.	0.	0.	0.	0.			
COHORT 4				0.175	0.	0.	0.	0.	0.		
COHORT 5					0.175	0.	0.	0.	0.	0.	
ANNUAL CASH FLOW											
PROJECTED	0.175	0.175	0.175	0.175	0.175	0.	0.	0.	0.	0.	0.875
AVERAGE	0.087										
PRESENT VALUE	0.730										

MEDIUM COST

	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.233	0.	0.	0.	0.	0.					
COHORT 2		0.233	0.	0.	0.	0.	0.				
COHORT 3			0.233	0.	0.	0.	0.	0.			
COHORT 4				0.233	0.	0.	0.	0.	0.		
COHORT 5					0.233	0.	0.	0.	0.	0.	
ANNUAL CASH FLOW											
PROJECTED	0.233	0.233	0.233	0.233	0.233	0.	0.	0.	0.	0.	1.166
AVERAGE	0.117										
PRESENT VALUE	0.973										

HIGH COST

	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.292	0.	0.	0.	0.	0.					
COHORT 2		0.292	0.	0.	0.	0.	0.				
COHORT 3			0.292	0.	0.	0.	0.	0.			
COHORT 4				0.292	0.	0.	0.	0.	0.		
COHORT 5					0.292	0.	0.	0.	0.	0.	
ANNUAL CASH FLOW											
PROJECTED	0.292	0.292	0.292	0.292	0.292	0.	0.	0.	0.	0.	1.458
AVERAGE	0.146										
PRESENT VALUE	1.216										

TABLE F-2. (CONTINUED)

GUIDANCE LEVEL 17. 5000 MICROWATTS PER SQ. CM

LOW COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.175	0.	0.	0.	0.	0.					
COHORT 2		0.175	0.	0.	0.	0.	0.				
COHORT 3			0.175	0.	0.	0.	0.	0.			
COHORT 4				0.175	0.	0.	0.	0.	0.		
COHORT 5					0.175	0.	0.	0.	0.	0.	
ANNUAL CASH FLOW PROJECTED	0.175	0.175	0.175	0.175	0.175	0.	0.	0.	0.	0.	0.875
AVERAGE	0.087										
PRESENT VALUE	0.730										

MEDIUM COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.233	0.	0.	0.	0.	0.					
COHORT 2		0.233	0.	0.	0.	0.	0.				
COHORT 3			0.233	0.	0.	0.	0.	0.			
COHORT 4				0.233	0.	0.	0.	0.	0.		
COHORT 5					0.233	0.	0.	0.	0.	0.	
ANNUAL CASH FLOW PROJECTED	0.233	0.233	0.233	0.233	0.233	0.	0.	0.	0.	0.	1.166
AVERAGE	0.117										
PRESENT VALUE	0.973										

HIGH COST	TIME PERIOD 0	1	2	3	4	5	6	7	8	9	TOTAL
COHORT 1	0.292	0.	0.	0.	0.	0.					
COHORT 2		0.292	0.	0.	0.	0.	0.				
COHORT 3			0.292	0.	0.	0.	0.	0.			
COHORT 4				0.292	0.	0.	0.	0.	0.		
COHORT 5					0.292	0.	0.	0.	0.	0.	
ANNUAL CASH FLOW PROJECTED	0.292	0.292	0.292	0.292	0.292	0.	0.	0.	0.	0.	1.458
AVERAGE	0.146										
PRESENT VALUE	1.216										

TABLE F-2. (CONTINUED)

```
GUIDANCE LEVEL    18.      10000 MICROWATTS PER SQ. CM

       LOW COST                                         TIME PERIOD
                        0         1         2         3         4         5         6         7         8         9        TOTAL
                    --------  --------  --------  --------  --------  --------  --------  --------  --------  --------  --------
     COHORT 1         0.175   0.        0.        0.        0.        0.
     COHORT 2                 0.175     0.        0.        0.        0.        0.
     COHORT 3                           0.175     0.        0.        0.        0.        0.
     COHORT 4                                     0.175     0.        0.        0.        0.        0.
     COHORT 5                                               0.175     0.        0.        0.        0.        0.
                    --------  --------  --------  --------  --------  --------  --------  --------  --------  --------  --------
ANNUAL CASH FLOW
    PROJECTED         0.175     0.175     0.175     0.175     0.175   0.        0.        0.        0.        0.          0.875
    AVERAGE           0.087
PRESENT VALUE         0.730
     MEDIUM COST                                        TIME PERIOD
                        0         1         2         3         4         5         6         7         8         9        TOTAL
                    --------  --------  --------  --------  --------  --------  --------  --------  --------  --------  --------
     COHORT 1         0.233   0.        0.        0.        0.        0.
     COHORT 2                 0.233     0.        0.        0.        0.        0.
     COHORT 3                           0.233     0.        0.        0.        0.        0.
     COHORT 4                                     0.233     0.        0.        0.        0.        0.
     COHORT 5                                               0.233     0.        0.        0.        0.        0.
                    --------  --------  --------  --------  --------  --------  --------  --------  --------  --------  --------
ANNUAL CASH FLOW
    PROJECTED         0.233     0.233     0.233     0.233     0.233   0.        0.        0.        0.        0.          1.166
    AVERAGE           0.117
PRESENT VALUE         0.973
      HIGH COST                                         TIME PERIOD
                        0         1         2         3         4         5         6         7         8         9        TOTAL
                    --------  --------  --------  --------  --------  --------  --------  --------  --------  --------  --------
     COHORT 1         0.292   0.        0.        0.        0.        0.
     COHORT 2                 0.292     0.        0.        0.        0.        0.
     COHORT 3                           0.292     0.        0.        0.        0.        0.
     COHORT 4                                     0.292     0.        0.        0.        0.        0.
     COHORT 5                                               0.292     0.        0.        0.        0.        0.
                    --------  --------  --------  --------  --------  --------  --------  --------  --------  --------  --------
ANNUAL CASH FLOW
    PROJECTED         0.292     0.292     0.292     0.292     0.292   0.        0.        0.        0.        0.          1.458
    AVERAGE           0.146
PRESENT VALUE         1.216
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TABLE F-3. AN ESTIMATE OF THE EFFECTS ON THE AVERAGE PROFITABLE TV BROADCAST STATION OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 3 COST LEVELS. RESULTS ARE SHOWN FOR THE AVERAGE COST OF COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. NUMBERS ARE IN THOUSANDS OF DOLLARS.

GUIDANCE LEVEL 1. 1 MICROWATTS PER SQ. CM LOW COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	70.607	62.196	58.050	53.903	49.757	45.610	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2309.393	2317.804	2321.950	2326.097	2330.243	2334.390	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	41.464	41.464	41.464	41.464	41.464	
(-) DEPRECIATION	0.	0.	41.464	60.814	58.050	58.050	58.050	
TAXABLE INCOME	2380.000	2378.500	2317.804	2302.601	2309.511	2313.658	2317.804	
GROSS TAX	1074.550	1073.860	1045.940	1038.946	1042.125	1044.032	1045.940	
INVESTMENT TAX CREDIT	0.	27.643	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1046.217	1045.940	1038.946	1042.125	1044.032	1045.940	
NET INCOME	1305.450	1263.176	1271.864	1283.004	1283.972	1286.211	1288.450	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	70.607	62.196	58.050	53.903	49.757	45.610	340.123
TAX SAVINGS	0.	28.333	28.610	35.604	32.425	30.518	28.610	184.099
NET COMPLIANCE MEASURE COST	0.	42.274	33.586	22.446	21.478	19.239	17.000	156.024
AVERAGE ANNUAL NET COST		26.004						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 109.409	COHORT1 131.190	COHORT2 119.264	COHORT3 108.422	COHORT4 98.565	COHORT5 89.605	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 1. 1 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	117.368	103.831	96.909	89.987	83.065	76.143	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2262.632	2276.169	2283.091	2290.013	2296.935	2303.857	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	69.221	69.221	69.221	69.221	69.221	
(-) DEPRECIATION	0.	0.	69.221	101.523	96.909	96.909	96.909	
TAXABLE INCOME	2380.000	2378.000	2276.169	2250.788	2262.325	2269.247	2276.169	
GROSS TAX	1074.550	1073.630	1026.788	1015.113	1020.420	1023.604	1026.788	
INVESTMENT TAX CREDIT	0.	46.147	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1027.483	1026.788	1015.113	1020.420	1023.604	1026.788	
NET INCOME	1305.450	1235.149	1249.381	1267.979	1269.594	1273.332	1277.070	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	117.368	103.831	96.909	89.987	83.065	76.143	567.301
TAX SAVINGS	0.	47.067	47.762	59.437	54.130	50.946	47.762	307.105
NET COMPLIANCE MEASURE COST	0.	70.301	56.069	37.471	35.856	32.118	28.380	260.195
AVERAGE ANNUAL NET COST		43.366						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 182.422	COHORT1 218.739	COHORT2 198.853	COHORT3 180.776	COHORT4 164.342	COHORT5 149.401	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 1. 1 MICROWATTS PER SQ. CM HIGH COST

		TIME PERIOD						
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	183.100	162.540	151.704	140.868	130.032	119.196	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2196.900	2217.460	2228.296	2239.132	2249.968	2260.804	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	108.360	108.360	108.360	108.360	108.360	
(-) DEPRECIATION	0.	0.	108.360	158.928	151.704	151.704	151.704	
TAXABLE INCOME	2380.000	2377.500	2217.460	2177.728	2195.788	2206.624	2217.460	
GROSS TAX	1074.550	1073.400	999.781	981.505	989.812	994.797	999.781	
INVESTMENT TAX CREDIT	0.	72.240	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1001.160	999.781	981.505	989.812	994.797	999.781	
NET INCOME	1305.450	1195.740	1217.678	1246.791	1249.319	1255.171	1261.022	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	183.100	162.540	151.704	140.868	130.032	119.196	887.442
TAX SAVINGS	0.	73.390	74.769	93.045	84.738	79.753	74.769	480.463
NET COMPLIANCE MEASURE COST	0.	109.710	87.772	58.659	56.131	50.279	44.428	406.978
AVERAGE ANNUAL NET COST		67.830						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 285.286	COHORT1 342.080	COHORT2 310.982	COHORT3 282.711	COHORT4 257.010	COHORT5 233.646	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 2. 10 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	54.758	47.932	44.736	41.541	38.345	35.150	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2325.242	2332.068	2335.264	2338.459	2341.655	2344.850	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	31.955	31.955	31.955	31.955	31.955	
(-) DEPRECIATION	0.	0.	31.955	46.867	44.736	44.736	44.736	
TAXABLE INCOME	2380.000	2378.500	2332.068	2320.351	2325.677	2328.873	2332.068	
GROSS TAX	1074.550	1073.860	1052.501	1047.112	1049.562	1051.031	1052.501	
INVESTMENT TAX CREDIT	0.	21.303	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1052.557	1052.501	1047.112	1049.562	1051.031	1052.501	
NET INCOME	1305.450	1272.685	1279.567	1288.152	1288.898	1290.623	1292.349	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	54.758	47.932	44.736	41.541	38.345	35.150	262.462
TAX SAVINGS	0.	21.993	22.049	27.438	24.988	23.519	22.049	142.036
NET COMPLIANCE MEASURE COST	0.	32.765	25.883	17.298	16.552	14.827	13.101	120.427
AVERAGE ANNUAL NET COST		20.071						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 84.472	COHORT1 101.289	COHORT2 92.081	COHORT3 83.710	COHORT4 76.100	COHORT5 69.182	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 2. 10 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	85.764	75.388	70.362	65.336	60.310	55.284	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2294.236	2304.612	2309.638	2314.664	2319.690	2324.716	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	50.259	50.259	50.259	50.259	50.259	
(-) DEPRECIATION	0.	0.	50.259	73.713	70.362	70.362	70.362	
TAXABLE INCOME	2380.000	2378.000	2304.612	2286.184	2294.560	2299.586	2304.612	
GROSS TAX	1074.550	1073.630	1039.872	1031.395	1035.248	1037.560	1039.872	
INVESTMENT TAX CREDIT	0.	33.506	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1040.124	1039.872	1031.395	1035.248	1037.560	1039.872	
NET INCOME	1305.450	1254.111	1264.741	1278.243	1279.416	1282.130	1284.844	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	85.764	75.388	70.362	65.336	60.310	55.284	412.445
TAX SAVINGS	0.	34.426	34.678	43.155	39.302	36.990	34.678	223.230
NET COMPLIANCE MEASURE COST	0.	51.339	40.709	27.207	26.034	23.320	20.606	189.214
AVERAGE ANNUAL NET COST		31.536						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 132.697	COHORT1 159.114	COHORT2 144.649	COHORT3 131.499	COHORT4 119.545	COHORT5 108.677	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 2. 10 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	103.991	91.342	85.253	79.163	73.074	66.984	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2276.009	2288.658	2294.747	2300.837	2306.926	2313.016	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	60.895	60.895	60.895	60.895	60.895	
(-) DEPRECIATION	0.	0.	60.895	89.312	85.253	85.253	85.253	
TAXABLE INCOME	2380.000	2377.500	2288.658	2266.330	2276.479	2282.568	2288.658	
GROSS TAX	1074.550	1073.400	1032.533	1022.262	1026.930	1029.731	1032.533	
INVESTMENT TAX CREDIT	0.	40.597	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1032.803	1032.533	1022.262	1026.930	1029.731	1032.533	
NET INCOME	1305.450	1243.205	1256.125	1272.486	1273.906	1277.195	1280.483	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	103.991	91.342	85.253	79.163	73.074	66.984	499.808
TAX SAVINGS	0.	41.747	42.017	52.288	47.620	44.819	42.017	270.508
NET COMPLIANCE MEASURE COST	0.	62.245	49.325	32.964	31.544	28.255	24.967	229.300
AVERAGE ANNUAL NET COST		38.217						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 160.814	COHORT1 192.829	COHORT2 175.299	COHORT3 159.363	COHORT4 144.875	COHORT5 131.705	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 3. 20 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	47.230	41.157	38.413	35.669	32.925	30.181	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2332.770	2338.843	2341.587	2344.331	2347.075	2349.819	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	27.438	27.438	27.438	27.438	27.438	
(-) DEPRECIATION	0.	0.	27.438	40.242	38.413	38.413	38.413	
TAXABLE INCOME	2380.000	2378.500	2338.843	2328.783	2333.356	2336.100	2338.843	
GROSS TAX	1074.550	1073.860	1055.618	1050.990	1053.094	1054.356	1055.618	
INVESTMENT TAX CREDIT	0.	18.292	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1055.568	1055.618	1050.990	1053.094	1054.356	1055.618	
NET INCOME	1305.450	1277.202	1283.225	1290.597	1291.237	1292.719	1294.201	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	47.230	41.157	38.413	35.669	32.925	30.181	225.575
TAX SAVINGS	0.	18.982	18.932	23.560	21.456	20.194	18.932	122.056
NET COMPLIANCE MEASURE COST	0.	28.248	22.225	14.853	14.213	12.731	11.249	103.518
AVERAGE ANNUAL NET COST		17.253						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 72.627	COHORT1 87.086	COHORT2 79.169	COHORT3 71.972	COHORT4 65.429	COHORT5 59.481	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 3. 20 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	69.087	60.379	56.353	52.328	48.303	44.278	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2310.913	2319.621	2323.647	2327.672	2331.697	2335.722	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	40.252	40.252	40.252	40.252	40.252	
(-) DEPRECIATION	0.	0.	40.252	59.037	56.353	56.353	56.353	
TAXABLE INCOME	2380.000	2378.000	2319.621	2304.862	2311.571	2315.596	2319.621	
GROSS TAX	1074.550	1073.630	1046.776	1039.987	1043.073	1044.924	1046.776	
INVESTMENT TAX CREDIT	0.	26.835	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1046.795	1046.776	1039.987	1043.073	1044.924	1046.776	
NET INCOME	1305.450	1264.118	1272.846	1283.660	1284.599	1286.773	1288.946	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	69.087	60.379	56.353	52.328	48.303	44.278	330.728
TAX SAVINGS	0.	27.755	27.774	34.563	31.477	29.626	27.774	178.970
NET COMPLIANCE MEASURE COST	0.	41.332	32.604	21.790	20.851	18.677	16.504	151.758
AVERAGE ANNUAL NET COST		25.293						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 106.457	COHORT1 127.651	COHORT2 116.046	COHORT3 105.497	COHORT4 95.906	COHORT5 87.187	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 3. 20 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	80.819	70.487	65.788	61.089	56.390	51.691	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2299.181	2309.513	2314.212	2318.911	2323.610	2328.309	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	46.992	46.992	46.992	46.992	46.992	
(-) DEPRECIATION	0.	0.	46.992	68.921	65.788	65.788	65.788	
TAXABLE INCOME	2380.000	2377.500	2309.513	2292.282	2300.114	2304.813	2309.513	
GROSS TAX	1074.550	1073.400	1042.126	1034.200	1037.803	1039.964	1042.126	
INVESTMENT TAX CREDIT	0.	31.328	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1042.072	1042.126	1034.200	1037.803	1039.964	1042.126	
NET INCOME	1305.450	1257.108	1267.387	1280.012	1281.108	1283.646	1286.183	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	80.819	70.487	65.788	61.089	56.390	51.691	386.265
TAX SAVINGS	0.	32.478	32.424	40.350	36.747	34.586	32.424	209.010
NET COMPLIANCE MEASURE COST	0.	48.342	38.063	25.438	24.342	21.804	19.267	177.255
AVERAGE ANNUAL NET COST		29.543						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 124.355	COHORT1 149.112	COHORT2 135.556	COHORT3 123.233	COHORT4 112.030	COHORT5 101.845	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 4. 50 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	35.691	30.772	28.721	26.669	24.618	22.566	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2344.309	2349.228	2351.279	2353.331	2355.382	2357.434	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	20.515	20.515	20.515	20.515	20.515	
(-) DEPRECIATION	0.	0.	20.515	30.088	28.721	28.721	28.721	
TAXABLE INCOME	2380.000	2378.500	2349.228	2341.706	2345.125	2347.176	2349.228	
GROSS TAX	1074.550	1073.860	1060.395	1056.935	1058.507	1059.451	1060.395	
INVESTMENT TAX CREDIT	0.	13.676	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1060.184	1060.395	1056.935	1058.507	1059.451	1060.395	
NET INCOME	1305.450	1284.125	1288.833	1294.345	1294.823	1295.931	1297.039	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	35.691	30.772	28.721	26.669	24.618	22.566	169.037
TAX SAVINGS	0.	14.366	14.155	17.615	16.042	15.099	14.155	91.433
NET COMPLIANCE MEASURE COST	0.	21.325	16.617	11.105	10.627	9.519	8.411	77.603
AVERAGE ANNUAL NET COST		12.934						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 54.473	COHORT1 65.317	COHORT2 59.379	COHORT3 53.981	COHORT4 49.074	COHORT5 44.612	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 4. 50 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	52.353	45.318	42.296	39.275	36.254	33.233	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2327.647	2334.682	2337.704	2340.725	2343.746	2346.767	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	30.212	30.212	30.212	30.212	30.212	
(-) DEPRECIATION	0.	0.	30.212	44.311	42.296	42.296	42.296	
TAXABLE INCOME	2380.000	2378.000	2334.682	2323.605	2328.640	2331.661	2334.682	
GROSS TAX	1074.550	1073.630	1053.704	1048.608	1050.924	1052.314	1053.704	
INVESTMENT TAX CREDIT	0.	20.141	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1053.489	1053.704	1048.608	1050.924	1052.314	1053.704	
NET INCOME	1305.450	1274.158	1280.978	1289.095	1289.800	1291.432	1293.063	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	52.353	45.318	42.296	39.275	36.254	33.233	248.729
TAX SAVINGS	0.	21.061	20.846	25.942	23.626	22.236	20.846	134.557
NET COMPLIANCE MEASURE COST	0.	31.292	24.472	16.355	15.650	14.018	12.387	114.173
AVERAGE ANNUAL NET COST		19.029						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 80.127	COHORT1 96.079	COHORT2 87.344	COHORT3 79.404	COHORT4 72.185	COHORT5 65.623	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 4. 50 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	60.126	51.863	48.406	44.948	41.491	38.033	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2319.874	2328.137	2331.594	2335.052	2338.509	2341.967	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	34.576	34.576	34.576	34.576	34.576	
(-) DEPRECIATION	0.	0.	34.576	50.711	48.406	48.406	48.406	
TAXABLE INCOME	2380.000	2377.500	2328.137	2315.459	2321.221	2324.679	2328.137	
GROSS TAX	1074.550	1073.400	1050.693	1044.861	1047.512	1049.102	1050.693	
INVESTMENT TAX CREDIT	0.	23.050	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1050.350	1050.693	1044.861	1047.512	1049.102	1050.693	
NET INCOME	1305.450	1269.524	1277.444	1286.733	1287.540	1289.407	1291.274	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	60.126	51.863	48.406	44.948	41.491	38.033	284.867
TAX SAVINGS	0.	24.200	23.857	29.689	27.038	25.448	23.857	154.089
NET COMPLIANCE MEASURE COST	0.	35.926	28.006	18.717	17.910	16.043	14.176	130.778
AVERAGE ANNUAL NET COST		21.796						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 91.796	COHORT1 110.070	COHORT2 100.064	COHORT3 90.967	COHORT4 82.697	COHORT5 75.179	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 5. 75 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	31.628	27.116	25.308	23.500	21.692	19.885	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2348.372	2352.884	2354.692	2356.500	2358.308	2360.115	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	18.077	18.077	18.077	18.077	18.077	
(-) DEPRECIATION	0.	0.	18.077	26.513	25.308	25.308	25.308	
TAXABLE INCOME	2380.000	2378.500	2352.884	2346.256	2349.269	2351.077	2352.884	
GROSS TAX	1074.550	1073.860	1062.077	1059.028	1060.414	1061.245	1062.077	
INVESTMENT TAX CREDIT	0.	12.051	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1061.809	1062.077	1059.028	1060.414	1061.245	1062.077	
NET INCOME	1305.450	1286.563	1290.808	1295.664	1296.086	1297.062	1298.038	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	31.628	27.116	25.308	23.500	21.692	19.885	149.129
TAX SAVINGS	0.	12.741	12.473	15.522	14.136	13.305	12.473	80.651
NET COMPLIANCE MEASURE COST	0.	18.887	14.642	9.786	9.364	8.388	7.412	68.478
AVERAGE ANNUAL NET COST		11.413						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 48.080	COHORT1 57.652	COHORT2 52.411	COHORT3 47.646	COHORT4 43.315	COHORT5 39.377	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 5. 75 MICROWATTS PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	45.185	38.866	36.275	33.684	31.093	28.502	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2334.815	2341.134	2343.725	2346.316	2348.907	2351.498	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	25.911	25.911	25.911	25.911	25.911	
(-) DEPRECIATION	0.	0.	25.911	38.003	36.275	36.275	36.275	
TAXABLE INCOME	2380.000	2378.000	2341.134	2331.633	2335.951	2338.542	2341.134	
GROSS TAX	1074.550	1073.630	1056.671	1052.301	1054.288	1055.480	1056.671	
INVESTMENT TAX CREDIT	0.	17.274	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1056.356	1056.671	1052.301	1054.288	1055.480	1056.671	
NET INCOME	1305.450	1278.459	1284.462	1291.424	1292.028	1293.427	1294.827	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	45.185	38.866	36.275	33.684	31.093	28.502	213.606
TAX SAVINGS	0.	18.194	17.879	22.249	20.262	19.070	17.879	115.533
NET COMPLIANCE MEASURE COST	0.	26.991	20.988	14.026	13.422	12.023	10.623	98.073
AVERAGE ANNUAL NET COST		16.346						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 68.849	COHORT1 82.555	COHORT2 75.050	COHORT3 68.227	COHORT4 62.025	COHORT5 56.386	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 5. 75 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	50.757	43.431	40.536	37.640	34.745	31.850	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2329.243	2336.569	2339.464	2342.360	2345.255	2348.150	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	28.954	28.954	28.954	28.954	28.954	
(-) DEPRECIATION	0.	0.	28.954	42.466	40.536	40.536	40.536	
TAXABLE INCOME	2380.000	2377.500	2336.569	2325.952	2330.778	2333.673	2336.569	
GROSS TAX	1074.550	1073.400	1054.572	1049.688	1051.908	1053.240	1054.572	
INVESTMENT TAX CREDIT	0.	19.303	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1054.097	1054.572	1049.688	1051.908	1053.240	1054.572	
NET INCOME	1305.450	1275.146	1281.997	1289.776	1290.452	1292.015	1293.579	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	50.757	43.431	40.536	37.640	34.745	31.850	238.959
TAX SAVINGS	0.	20.453	19.978	24.862	22.642	21.310	19.978	129.224
NET COMPLIANCE MEASURE COST	0.	30.304	23.453	15.674	14.998	13.435	11.871	109.735
AVERAGE ANNUAL NET COST		18.289						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 77.054	COHORT1 92.394	COHORT2 83.995	COHORT3 76.359	COHORT4 69.417	COHORT5 63.106	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 6. 100 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	30.056	25.701	23.987	22.274	20.560	18.847	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2349.944	2354.299	2356.013	2357.726	2359.439	2361.153	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	17.134	17.134	17.134	17.134	17.134	
(-) DEPRECIATION	0.	0.	17.134	25.129	23.987	23.987	23.987	
TAXABLE INCOME	2380.000	2378.500	2354.299	2348.017	2350.873	2352.586	2354.299	
GROSS TAX	1074.550	1073.860	1062.728	1059.838	1061.151	1061.940	1062.728	
INVESTMENT TAX CREDIT	0.	11.422	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1062.437	1062.728	1059.838	1061.151	1061.940	1062.728	
NET INCOME	1305.450	1287.506	1291.572	1296.175	1296.575	1297.500	1298.425	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	30.056	25.701	23.987	22.274	20.560	18.847	141.426
TAX SAVINGS	0.	12.113	11.822	14.712	13.399	12.610	11.822	76.478
NET COMPLIANCE MEASURE COST	0.	17.944	13.878	9.275	8.875	7.950	7.025	64.947
AVERAGE ANNUAL NET COST		10.825						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 45.606	COHORT1 54.686	COHORT2 49.714	COHORT3 45.195	COHORT4 41.086	COHORT5 37.351	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 6. 100 MICROWATTS PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	41.942	35.947	33.551	31.154	28.758	26.361	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2338.058	2344.052	2346.449	2348.845	2351.242	2353.639	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	23.965	23.965	23.965	23.965	23.965	
(-) DEPRECIATION	0.	0.	23.965	35.149	33.551	33.551	33.551	
TAXABLE INCOME	2380.000	2378.000	2344.052	2335.265	2339.260	2341.656	2344.053	
GROSS TAX	1074.550	1073.630	1058.014	1053.972	1055.809	1056.912	1058.014	
INVESTMENT TAX CREDIT	0.	15.977	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1057.653	1058.014	1053.972	1055.809	1056.912	1058.014	
NET INCOME	1305.450	1280.405	1286.038	1292.477	1293.036	1294.330	1295.624	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	41.942	35.947	33.551	31.154	28.758	26.361	197.714
TAX SAVINGS	0.	16.897	16.536	20.578	18.741	17.638	16.536	106.925
NET COMPLIANCE MEASURE COST	0.	25.045	19.412	12.973	12.414	11.120	9.826	90.789
AVERAGE ANNUAL NET COST		15.131						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 63.746	COHORT1 76.436	COHORT2 69.487	COHORT3 63.170	COHORT4 57.428	COHORT5 52.207	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 6. 100 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	46.436	39.542	36.906	34.270	31.634	28.998	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2333.564	2340.458	2343.094	2345.730	2348.366	2351.002	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	26.361	26.361	26.361	26.361	26.361	
(-) DEPRECIATION	0.	0.	26.361	38.664	36.906	36.906	36.906	
TAXABLE INCOME	2380.000	2377.500	2340.458	2330.792	2335.185	2337.822	2340.458	
GROSS TAX	1074.550	1073.400	1056.361	1051.914	1053.935	1055.148	1056.361	
INVESTMENT TAX CREDIT	0.	17.574	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1055.826	1056.361	1051.914	1053.935	1055.148	1056.361	
NET INCOME	1305.450	1277.738	1284.097	1291.180	1291.795	1293.218	1294.642	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	46.436	39.542	36.906	34.270	31.634	28.998	217.786
TAX SAVINGS	0.	18.724	18.189	22.636	20.615	19.402	18.189	117.756
NET COMPLIANCE MEASURE COST	0.	27.712	21.353	14.270	13.655	12.232	10.808	100.030
AVERAGE ANNUAL NET COST		16.672						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 70.255	COHORT1 84.242	COHORT2 76.583	COHORT3 69.621	COHORT4 63.292	COHORT5 57.538	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 7. 200 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	22.550	18.945	17.682	16.419	15.156	13.893	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2357.450	2361.055	2362.318	2363.581	2364.844	2366.107	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	12.630	12.630	12.630	12.630	12.630	
(-) DEPRECIATION	0.	0.	12.630	18.524	17.682	17.682	17.682	
TAXABLE INCOME	2380.000	2378.500	2361.055	2356.424	2358.529	2359.792	2361.055	
GROSS TAX	1074.550	1073.860	1065.835	1063.705	1064.673	1065.254	1065.835	
INVESTMENT TAX CREDIT	0.	8.420	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1065.440	1065.835	1063.705	1064.673	1065.254	1065.835	
NET INCOME	1305.450	1292.010	1295.220	1298.613	1298.908	1299.590	1300.272	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	22.550	18.945	17.682	16.419	15.156	13.893	104.645
TAX SAVINGS	0.	9.110	8.715	10.845	9.877	9.296	8.715	56.557
NET COMPLIANCE MEASURE COST	0.	13.440	10.230	6.837	6.542	5.860	5.178	48.088
AVERAGE ANNUAL NET COST		8.015						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 33.796	COHORT1 40.524	COHORT2 36.840	COHORT3 33.491	COHORT4 30.446	COHORT5 27.678	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 7. 200 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	30.600	25.740	24.024	22.308	20.592	18.876	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2349.400	2354.260	2355.976	2357.692	2359.408	2361.124	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	17.160	17.160	17.160	17.160	17.160	
(-) DEPRECIATION	0.	0.	17.160	25.168	24.024	24.024	24.024	
TAXABLE INCOME	2380.000	2378.000	2354.260	2347.968	2350.828	2352.544	2354.260	
GROSS TAX	1074.550	1073.630	1062.710	1059.815	1061.131	1061.920	1062.710	
INVESTMENT TAX CREDIT	0.	11.440	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1062.190	1062.710	1059.815	1061.131	1061.920	1062.710	
NET INCOME	1305.450	1287.210	1291.550	1296.161	1296.561	1297.488	1298.414	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	30.600	25.740	24.024	22.308	20.592	18.876	142.140
TAX SAVINGS	0.	12.360	11.840	14.735	13.419	12.630	11.840	76.824
NET COMPLIANCE MEASURE COST	0.	18.240	13.900	9.289	8.889	7.962	7.036	65.316
AVERAGE ANNUAL NET COST		10.886						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 45.900	COHORT1 55.038	COHORT2 50.035	COHORT3 45.486	COHORT4 41.351	COHORT5 37.592	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 7. 200 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	33.960	28.314	26.426	24.539	22.651	20.764	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2346.040	2351.686	2353.574	2355.461	2357.349	2359.236	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	18.876	18.876	18.876	18.876	18.876	
(-) DEPRECIATION	0.	0.	18.876	27.685	26.426	26.426	26.426	
TAXABLE INCOME	2380.000	2377.500	2351.686	2344.765	2347.911	2349.798	2351.686	
GROSS TAX	1074.550	1073.400	1061.526	1058.342	1059.789	1060.657	1061.526	
INVESTMENT TAX CREDIT	0.	12.584	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1060.816	1061.526	1058.342	1059.789	1060.657	1061.526	
NET INCOME	1305.450	1285.224	1290.160	1295.232	1295.672	1296.692	1297.711	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	33.960	28.314	26.426	24.539	22.651	20.764	156.654
TAX SAVINGS	0.	13.734	13.024	16.208	14.761	13.893	13.024	84.645
NET COMPLIANCE MEASURE COST	0.	20.226	15.290	10.218	9.778	8.758	7.739	72.009
AVERAGE ANNUAL NET COST		12.002						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 50.626	COHORT1 60.704	COHORT2 55.186	COHORT3 50.169	COHORT4 45.608	COHORT5 41.462	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 8. 300 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	20.724	17.301	16.148	14.994	13.841	12.688	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2359.276	2362.699	2363.852	2365.006	2366.159	2367.312	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	11.534	11.534	11.534	11.534	11.534	
(-) DEPRECIATION	0.	0.	11.534	16.917	16.148	16.148	16.148	
TAXABLE INCOME	2380.000	2378.500	2362.699	2358.469	2360.392	2361.545	2362.699	
GROSS TAX	1074.550	1073.860	1066.591	1064.646	1065.530	1066.061	1066.591	
INVESTMENT TAX CREDIT	0.	7.689	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1066.171	1066.591	1064.646	1065.530	1066.061	1066.591	
NET INCOME	1305.450	1293.106	1296.107	1299.206	1299.475	1300.098	1300.721	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	20.724	17.301	16.148	14.994	13.841	12.688	95.696
TAX SAVINGS	0.	8.379	7.959	9.904	9.020	8.489	7.959	51.710
NET COMPLIANCE MEASURE COST	0.	12.344	9.343	6.244	5.975	5.352	4.729	43.986
AVERAGE ANNUAL NET COST		7.331						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 30.922	COHORT1 37.078	COHORT2 33.708	COHORT3 30.643	COHORT4 27.858	COHORT5 25.325	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 8. 300 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	27.632	23.068	21.531	19.993	18.455	16.917	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2352.368	2356.932	2358.469	2360.007	2361.545	2363.083	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	15.379	15.379	15.379	15.379	15.379	
(-) DEPRECIATION	0.	0.	15.379	22.556	21.531	21.531	21.531	
TAXABLE INCOME	2380.000	2378.000	2356.932	2351.293	2353.856	2355.394	2356.932	
GROSS TAX	1074.550	1073.630	1063.939	1061.345	1062.524	1063.231	1063.939	
INVESTMENT TAX CREDIT	0.	10.253	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1063.377	1063.939	1061.345	1062.524	1063.231	1063.939	
NET INCOME	1305.450	1288.991	1292.993	1297.125	1297.484	1298.314	1299.145	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	27.632	23.068	21.531	19.993	18.455	16.917	127.595
TAX SAVINGS	0.	11.173	10.611	13.205	12.026	11.319	10.611	68.946
NET COMPLIANCE MEASURE COST	0.	16.459	12.457	8.325	7.966	7.136	6.305	58.649
AVERAGE ANNUAL NET COST		9.775						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 41.230	COHORT1 49.438	COHORT2 44.944	COHORT3 40.858	COHORT4 37.143	COHORT5 33.767	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 8. 300 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	30.695	25.375	23.684	21.992	20.300	18.609	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2349.305	2354.625	2356.316	2358.008	2359.700	2361.391	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	16.917	16.917	16.917	16.917	16.917	
(-) DEPRECIATION	0.	0.	16.917	24.811	23.684	23.684	23.684	
TAXABLE INCOME	2380.000	2377.500	2354.625	2348.422	2351.241	2352.933	2354.625	
GROSS TAX	1074.550	1073.400	1062.877	1060.024	1061.321	1062.099	1062.877	
INVESTMENT TAX CREDIT	0.	11.278	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1062.122	1062.877	1060.024	1061.321	1062.099	1062.877	
NET INCOME	1305.450	1287.183	1291.747	1296.292	1296.687	1297.601	1298.514	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	30.695	25.375	23.684	21.992	20.300	18.609	140.654
TAX SAVINGS	0.	12.428	11.673	14.526	13.229	12.451	11.673	75.979
NET COMPLIANCE MEASURE COST	0.	18.267	13.703	9.158	8.763	7.849	6.936	64.675
AVERAGE ANNUAL NET COST		10.779						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 45.488	COHORT1 54.544	COHORT2 49.585	COHORT3 45.077	COHORT4 40.980	COHORT5 37.254	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 9. 400 MICROWATTS PER SQ. CM LOW COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	20.596	17.187	16.041	14.895	13.749	12.603	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2359.404	2362.813	2363.959	2365.105	2366.251	2367.397	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	11.458	11.458	11.458	11.458	11.458	
(-) DEPRECIATION	0.	0.	11.458	16.805	16.041	16.041	16.041	
TAXABLE INCOME	2380.000	2378.500	2362.813	2358.612	2360.522	2361.668	2362.813	
GROSS TAX	1074.550	1073.860	1066.644	1064.712	1065.590	1066.117	1066.644	
INVESTMENT TAX CREDIT	0.	7.638	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1066.222	1066.644	1064.712	1065.590	1066.117	1066.644	
NET INCOME	1305.450	1293.182	1296.169	1299.248	1299.515	1300.134	1300.752	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	20.596	17.187	16.041	14.895	13.749	12.603	95.071
TAX SAVINGS	0.	8.328	7.906	9.838	8.960	8.433	7.906	51.371
NET COMPLIANCE MEASURE COST	0.	12.268	9.281	6.202	5.935	5.316	4.698	43.700
AVERAGE ANNUAL NET COST		7.283						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 30.722	COHORT1 36.838	COHORT2 33.489	COHORT3 30.444	COHORT4 27.677	COHORT5 25.161	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 9. 400 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	27.462	22.915	21.388	19.860	18.332	16.805	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2352.538	2357.085	2358.612	2360.140	2361.668	2363.195	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	15.277	15.277	15.277	15.277	15.277	
(-) DEPRECIATION	0.	0.	15.277	22.406	21.388	21.388	21.388	
TAXABLE INCOME	2380.000	2378.000	2357.085	2351.483	2354.029	2355.557	2357.085	
GROSS TAX	1074.550	1073.630	1064.009	1061.432	1062.603	1063.306	1064.009	
INVESTMENT TAX CREDIT	0.	10.185	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1063.445	1064.009	1061.432	1062.603	1063.306	1064.009	
NET INCOME	1305.450	1289.093	1293.076	1297.180	1297.537	1298.362	1299.186	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	27.462	22.915	21.388	19.860	18.332	16.805	126.762
TAX SAVINGS	0.	11.105	10.541	13.118	11.947	11.244	10.541	68.495
NET COMPLIANCE MEASURE COST	0.	16.357	12.374	8.270	7.913	7.088	6.264	58.267
AVERAGE ANNUAL NET COST		9.711						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 40.962	COHORT1 49.117	COHORT2 44.652	COHORT3 40.593	COHORT4 36.902	COHORT5 33.548	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 9. 400 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	30.508	25.207	23.526	21.846	20.166	18.485	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2349.492	2354.793	2356.474	2358.154	2359.834	2361.515	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	16.805	16.805	16.805	16.805	16.805	
(-) DEPRECIATION	0.	0.	16.805	24.647	23.526	23.526	23.526	
TAXABLE INCOME	2380.000	2377.500	2354.793	2348.631	2351.432	2353.113	2354.793	
GROSS TAX	1074.550	1073.400	1062.955	1060.120	1061.409	1062.182	1062.955	
INVESTMENT TAX CREDIT	0.	11.203	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1062.197	1062.955	1060.120	1061.409	1062.182	1062.955	
NET INCOME	1305.450	1287.295	1291.838	1296.353	1296.745	1297.653	1298.560	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	30.508	25.207	23.526	21.846	20.166	18.485	139.738
TAX SAVINGS	0.	12.353	11.595	14.430	13.141	12.368	11.595	75.482
NET COMPLIANCE MEASURE COST	0.	18.155	13.612	9.097	8.705	7.797	6.890	64.255
AVERAGE ANNUAL NET COST		10.709						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 45.194	COHORT1 54.191	COHORT2 49.264	COHORT3 44.786	COHORT4 40.714	COHORT5 37.013	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 10. 500 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	20.475	17.077	15.939	14.800	13.662	12.523	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2359.525	2362.922	2364.061	2365.199	2366.338	2367.476	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	11.385	11.385	11.385	11.385	11.385	
(-) DEPRECIATION	0.	0.	11.385	16.698	15.939	15.939	15.939	
TAXABLE INCOME	2380.000	2378.500	2362.922	2358.748	2360.645	2361.784	2362.922	
GROSS TAX	1074.550	1073.860	1066.694	1064.774	1065.647	1066.171	1066.694	
INVESTMENT TAX CREDIT	0.	7.590	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1066.270	1066.694	1064.774	1065.647	1066.171	1066.694	
NET INCOME	1305.450	1293.255	1296.228	1299.287	1299.553	1300.167	1300.782	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	20.475	17.077	15.939	14.800	13.662	12.523	94.477
TAX SAVINGS	0.	8.280	7.856	9.776	8.903	8.379	7.856	51.050
NET COMPLIANCE MEASURE COST	0.	12.195	9.222	6.163	5.897	5.283	4.668	43.428
AVERAGE ANNUAL NET COST		7.238						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 30.531	COHORT1 36.609	COHORT2 33.281	COHORT3 30.256	COHORT4 27.505	COHORT5 25.005	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 10. 500 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	27.300	22.770	21.252	19.734	18.216	16.698	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2352.700	2357.230	2358.748	2360.266	2361.784	2363.302	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	15.180	15.180	15.180	15.180	15.180	
(-) DEPRECIATION	0.	0.	15.180	22.264	21.252	21.252	21.252	
TAXABLE INCOME	2380.000	2378.000	2357.230	2351.664	2354.194	2355.712	2357.230	
GROSS TAX	1074.550	1073.630	1064.076	1061.515	1062.679	1063.378	1064.076	
INVESTMENT TAX CREDIT	0.	10.120	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1063.510	1064.076	1061.515	1062.679	1063.378	1064.076	
NET INCOME	1305.450	1289.190	1293.154	1297.233	1297.587	1298.406	1299.226	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	27.300	22.770	21.252	19.734	18.216	16.698	125.970
TAX SAVINGS	0.	11.040	10.474	13.035	11.871	11.172	10.474	68.066
NET COMPLIANCE MEASURE COST	0.	16.260	12.296	8.217	7.863	7.044	6.224	57.904
AVERAGE ANNUAL NET COST		9.651						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 40.708	COHORT1 48.812	COHORT2 44.375	COHORT3 40.341	COHORT4 36.673	COHORT5 33.339	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 10. 500 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.00	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	30.330	25.047	23.377	21.707	20.038	18.368	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2349.670	2354.953	2356.623	2358.293	2359.962	2361.632	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	16.698	16.698	16.698	16.698	16.698	
(-) DEPRECIATION	0.	0.	16.698	24.490	23.377	23.377	23.377	
TAXABLE INCOME	2380.000	2377.500	2354.953	2348.830	2351.613	2353.283	2354.953	
GROSS TAX	1074.550	1073.400	1063.028	1060.212	1061.492	1062.260	1063.028	
INVESTMENT TAX CREDIT	0.	11.132	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1062.268	1063.028	1060.212	1061.492	1062.260	1063.028	
NET INCOME	1305.450	1287.402	1291.925	1296.411	1296.800	1297.702	1298.604	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	30.330	25.047	23.377	21.707	20.038	18.368	138.867
TAX SAVINGS	0.	12.282	11.522	14.338	13.058	12.290	11.522	75.011
NET COMPLIANCE MEASURE COST	0.	18.048	13.525	9.039	8.650	7.748	6.846	63.856
AVERAGE ANNUAL NET COST		10.643						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 44.914	COHORT1 53.856	COHORT2 48.960	COHORT3 44.509	COHORT4 40.462	COHORT5 36.784	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 11. 600 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	15.750	12.825	11.970	11.115	10.260	9.405	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2364.250	2367.175	2368.030	2368.885	2369.740	2370.595	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	8.550	8.550	8.550	8.550	8.550	
(-) DEPRECIATION	0.	0.	8.550	12.540	11.970	11.970	11.970	
TAXABLE INCOME	2380.000	2378.500	2367.175	2364.040	2365.465	2366.320	2367.175	
GROSS TAX	1074.550	1073.860	1068.650	1067.208	1067.864	1068.257	1068.650	
INVESTMENT TAX CREDIT	0.	5.700	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1068.160	1068.650	1067.208	1067.864	1068.257	1068.650	
NET INCOME	1305.450	1296.090	1298.524	1300.822	1301.021	1301.483	1301.945	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	15.750	12.825	11.970	11.115	10.260	9.405	71.325
TAX SAVINGS	0.	6.390	5.899	7.342	6.686	6.293	5.899	38.509
NET COMPLIANCE MEASURE COST	0.	9.360	6.926	4.628	4.429	3.967	3.506	32.816
AVERAGE ANNUAL NET COST		5.469						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 23.097	COHORT1 27.695	COHORT2 25.177	COHORT3 22.888	COHORT4 20.808	COHORT5 18.916	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 11. 600 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	21.000	17.100	15.960	14.820	13.680	12.540	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2359.000	2362.900	2364.040	2365.180	2366.320	2367.460	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	11.400	11.400	11.400	11.400	11.400	
(-) DEPRECIATION	0.	0.	11.400	16.720	15.960	15.960	15.960	
TAXABLE INCOME	2380.000	2378.000	2362.900	2358.720	2360.620	2361.760	2362.900	
GROSS TAX	1074.550	1073.630	1066.684	1064.761	1065.635	1066.160	1066.684	
INVESTMENT TAX CREDIT	0.	7.600	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1066.030	1066.684	1064.761	1065.635	1066.160	1066.684	
NET INCOME	1305.450	1292.970	1296.216	1299.279	1299.545	1300.160	1300.776	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	21.000	17.100	15.960	14.820	13.680	12.540	95.100
TAX SAVINGS	0.	8.520	7.866	9.789	8.915	8.390	7.866	51.346
NET COMPLIANCE MEASURE COST	0.	12.480	9.234	6.171	5.905	5.290	4.674	43.754
AVERAGE ANNUAL NET COST		7.292						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 30.796	COHORT1 36.926	COHORT2 33.569	COHORT3 30.518	COHORT4 27.743	COHORT5 25.221	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 11. 600 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	23.400	18.810	17.556	16.302	15.048	13.794	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2356.600	2361.190	2362.444	2363.698	2364.952	2366.206	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	12.540	12.540	12.540	12.540	12.540	
(-) DEPRECIATION	0.	0.	12.540	18.392	17.556	17.556	17.556	
TAXABLE INCOME	2380.000	2377.500	2361.190	2356.592	2358.682	2359.936	2361.190	
GROSS TAX	1074.550	1073.400	1065.897	1063.782	1064.744	1065.321	1065.897	
INVESTMENT TAX CREDIT	0.	8.360	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1065.040	1065.897	1063.782	1064.744	1065.321	1065.897	
NET INCOME	1305.450	1291.560	1295.293	1298.662	1298.954	1299.631	1300.309	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	23.400	18.810	17.556	16.302	15.048	13.794	104.910
TAX SAVINGS	0.	9.510	8.653	10.768	9.806	9.229	8.653	56.619
NET COMPLIANCE MEASURE COST	0.	13.890	10.157	6.788	6.496	5.819	5.141	48.291
AVERAGE ANNUAL NET COST		8.049						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 34.010	COHORT1 40.781	COHORT2 37.074	COHORT3 33.703	COHORT4 30.639	COHORT5 27.854	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 12. 700 MICROWATTS PER SQ. CM

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	LOW COST TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	15.750	12.825	11.970	11.115	10.260	9.405	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2364.250	2367.175	2368.030	2368.885	2369.740	2370.595	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	8.550	8.550	8.550	8.550	8.550	
(-) DEPRECIATION	0.	0.	8.550	12.540	11.970	11.970	11.970	
TAXABLE INCOME	2380.000	2378.500	2367.175	2364.040	2365.465	2366.320	2367.175	
GROSS TAX	1074.550	1073.860	1068.650	1067.208	1067.864	1068.257	1068.650	
INVESTMENT TAX CREDIT	0.	5.700	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1068.160	1068.650	1067.208	1067.864	1068.257	1068.650	
NET INCOME	1305.450	1296.090	1298.524	1300.822	1301.021	1301.483	1301.945	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	15.750	12.825	11.970	11.115	10.260	9.405	71.325
TAX SAVINGS	0.	6.390	5.899	7.342	6.686	6.293	5.899	38.509
NET COMPLIANCE MEASURE COST	0.	9.360	6.926	4.628	4.429	3.967	3.506	32.816
AVERAGE ANNUAL NET COST		5.469						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 23.097	COHORT1 27.695	COHORT2 25.177	COHORT3 22.888	COHORT4 20.808	COHORT5 18.916	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 12. 700 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	21.000	17.100	15.960	14.820	13.680	12.540	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2359.000	2362.900	2364.040	2365.180	2366.320	2367.460	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	11.400	11.400	11.400	11.400	11.400	
(-) DEPRECIATION	0.	0.	11.400	16.720	15.960	15.960	15.960	
TAXABLE INCOME	2380.000	2378.000	2362.900	2358.720	2360.620	2361.760	2362.900	
GROSS TAX	1074.550	1073.630	1066.684	1064.761	1065.635	1066.160	1066.684	
INVESTMENT TAX CREDIT	0.	7.600	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1066.030	1066.684	1064.761	1065.635	1066.160	1066.684	
NET INCOME	1305.450	1292.970	1296.216	1299.279	1299.545	1300.160	1300.776	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	21.000	17.100	15.960	14.820	13.680	12.540	95.100
TAX SAVINGS	0.	8.520	7.866	9.789	8.915	8.390	7.866	51.346
NET COMPLIANCE MEASURE COST	0.	12.480	9.234	6.171	5.905	5.290	4.674	43.754
AVERAGE ANNUAL NET COST		7.292						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 30.796	COHORT1 36.926	COHORT2 33.569	COHORT3 30.518	COHORT4 27.743	COHORT5 25.221	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 12. 700 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	23.400	18.810	17.556	16.302	15.048	13.794	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2356.600	2361.190	2362.444	2363.698	2364.952	2366.206	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	12.540	12.540	12.540	12.540	12.540	
(-) DEPRECIATION	0.	0.	12.540	18.392	17.556	17.556	17.556	
TAXABLE INCOME	2380.000	2377.500	2361.190	2356.592	2358.682	2359.936	2361.190	
GROSS TAX	1074.550	1073.400	1065.897	1063.782	1064.744	1065.321	1065.897	
INVESTMENT TAX CREDIT	0.	8.360	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1065.040	1065.897	1063.782	1064.744	1065.321	1065.897	
NET INCOME	1305.450	1291.560	1295.293	1298.662	1298.954	1299.631	1300.309	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	23.400	18.810	17.556	16.302	15.048	13.794	104.910
TAX SAVINGS	0.	9.510	8.653	10.768	9.806	9.229	8.653	56.619
NET COMPLIANCE MEASURE COST	0.	13.890	10.157	6.788	6.496	5.819	5.141	48.291
AVERAGE ANNUAL NET COST		8.049						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 34.010	COHORT1 40.781	COHORT2 37.074	COHORT3 33.703	COHORT4 30.639	COHORT5 27.854	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 13. 800 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	15.750	12.825	11.970	11.115	10.260	9.405	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2364.250	2367.175	2368.030	2368.885	2369.740	2370.595	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	8.550	8.550	8.550	8.550	8.550	
(-) DEPRECIATION	0.	0.	8.550	12.540	11.970	11.970	11.970	
TAXABLE INCOME	2380.000	2378.500	2367.175	2364.040	2365.465	2366.320	2367.175	
GROSS TAX	1074.550	1073.860	1068.650	1067.208	1067.864	1068.257	1068.650	
INVESTMENT TAX CREDIT	0.	5.700	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1068.160	1068.650	1067.208	1067.864	1068.257	1068.650	
NET INCOME	1305.450	1296.090	1298.524	1300.822	1301.021	1301.483	1301.945	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	15.750	12.825	11.970	11.115	10.260	9.405	71.325
TAX SAVINGS	0.	6.390	5.899	7.342	6.686	6.293	5.899	38.509
NET COMPLIANCE MEASURE COST	0.	9.360	6.926	4.628	4.429	3.967	3.506	32.816
AVERAGE ANNUAL NET COST		5.469						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 23.097	COHORT1 27.695	COHORT2 25.177	COHORT3 22.888	COHORT4 20.808	COHORT5 18.916	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 13. 800 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	21.000	17.100	15.960	14.820	13.680	12.540	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2359.000	2362.900	2364.040	2365.180	2366.320	2367.460	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	11.400	11.400	11.400	11.400	11.400	
(-) DEPRECIATION	0.	0.	11.400	16.720	15.960	15.960	15.960	
TAXABLE INCOME	2380.000	2378.000	2362.900	2358.720	2360.620	2361.760	2362.900	
GROSS TAX	1074.550	1073.630	1066.684	1064.761	1065.635	1066.160	1066.684	
INVESTMENT TAX CREDIT	0.	7.600	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1066.030	1066.684	1064.761	1065.635	1066.160	1066.684	
NET INCOME	1305.450	1292.970	1296.216	1299.279	1299.545	1300.160	1300.776	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	21.000	17.100	15.960	14.820	13.680	12.540	95.100
TAX SAVINGS	0.	8.520	7.866	9.789	8.915	8.390	7.866	51.346
NET COMPLIANCE MEASURE COST	0.	12.480	9.234	6.171	5.905	5.290	4.674	43.754
AVERAGE ANNUAL NET COST		7.292						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 30.796	COHORT1 36.926	COHORT2 33.569	COHORT3 30.518	COHORT4 27.743	COHORT5 25.221	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 13. 800 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	23.400	18.810	17.556	16.302	15.048	13.794	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2356.600	2361.190	2362.444	2363.698	2364.952	2366.206	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	12.540	12.540	12.540	12.540	12.540	
(-) DEPRECIATION	0.	0.	12.540	18.392	17.556	17.556	17.556	
TAXABLE INCOME	2380.000	2377.500	2361.190	2356.592	2358.682	2359.936	2361.190	
GROSS TAX	1074.550	1073.400	1065.897	1063.782	1064.744	1065.321	1065.897	
INVESTMENT TAX CREDIT	0.	8.360	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1065.040	1065.897	1063.782	1064.744	1065.321	1065.897	
NET INCOME	1305.450	1291.560	1295.293	1298.662	1298.954	1299.631	1300.309	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	23.400	18.810	17.556	16.302	15.048	13.794	104.910
TAX SAVINGS	0.	9.510	8.653	10.768	9.806	9.229	8.653	56.619
NET COMPLIANCE MEASURE COST	0.	13.890	10.157	6.788	6.496	5.819	5.141	48.291
AVERAGE ANNUAL NET COST		8.049						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 34.010	COHORT1 40.781	COHORT2 37.074	COHORT3 33.703	COHORT4 30.639	COHORT5 27.854	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 14. 900 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM	TIME PERIOD					
		0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	15.750	12.825	11.970	11.115	10.260	9.405	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2364.250	2367.175	2368.030	2368.885	2369.740	2370.595	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	8.550	8.550	8.550	8.550	8.550	
(-) DEPRECIATION	0.	0.	8.550	12.540	11.970	11.970	11.970	
TAXABLE INCOME	2380.000	2378.500	2367.175	2364.040	2365.465	2366.320	2367.175	
GROSS TAX	1074.550	1073.860	1068.650	1067.208	1067.864	1068.257	1068.650	
INVESTMENT TAX CREDIT	0.	5.700	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1068.160	1068.650	1067.208	1067.864	1068.257	1068.650	
NET INCOME	1305.450	1296.090	1298.524	1300.822	1301.021	1301.483	1301.945	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	15.750	12.825	11.970	11.115	10.260	9.405	71.325
TAX SAVINGS	0.	6.390	5.899	7.342	6.686	6.293	5.899	38.509
NET COMPLIANCE MEASURE COST	0.	9.360	6.926	4.628	4.429	3.967	3.506	32.816
AVERAGE ANNUAL NET COST		5.469						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 23.097	COHORT1 27.695	COHORT2 25.177	COHORT3 22.888	COHORT4 20.808	COHORT5 18.916	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 14. 900 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	21.000	17.100	15.960	14.820	13.680	12.540	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2359.000	2362.900	2364.040	2365.180	2366.320	2367.460	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	11.400	11.400	11.400	11.400	11.400	
(-) DEPRECIATION	0.	0.	11.400	16.720	15.960	15.960	15.960	
TAXABLE INCOME	2380.000	2378.000	2362.900	2358.720	2360.620	2361.760	2362.900	
GROSS TAX	1074.550	1073.630	1066.684	1064.761	1065.635	1066.160	1066.684	
INVESTMENT TAX CREDIT	0.	7.600	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1066.030	1066.684	1064.761	1065.635	1066.160	1066.684	
NET INCOME	1305.450	1292.970	1296.216	1299.279	1299.545	1300.160	1300.776	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	21.000	17.100	15.960	14.820	13.680	12.540	95.100
TAX SAVINGS	0.	8.520	7.866	9.789	8.915	8.390	7.866	51.346
NET COMPLIANCE MEASURE COST	0.	12.480	9.234	6.171	5.905	5.290	4.674	43.754
AVERAGE ANNUAL NET COST		7.292						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 30.796	COHORT1 36.926	COHORT2 33.569	COHORT3 30.518	COHORT4 27.743	COHORT5 25.221	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 14. 900 MICROWATTS PER SQ. CM HIGH COST

TIME PERIOD

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	23.400	18.810	17.556	16.302	15.048	13.794	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2356.600	2361.190	2362.444	2363.698	2364.952	2366.206	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	12.540	12.540	12.540	12.540	12.540	
(-) DEPRECIATION	0.	0.	12.540	18.392	17.556	17.556	17.556	
TAXABLE INCOME	2380.000	2377.500	2361.190	2356.592	2358.682	2359.936	2361.190	
GROSS TAX	1074.550	1073.400	1065.897	1063.782	1064.744	1065.321	1065.897	
INVESTMENT TAX CREDIT	0.	8.360	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1065.040	1065.897	1063.782	1064.744	1065.321	1065.897	
NET INCOME	1305.450	1291.560	1295.293	1298.662	1298.954	1299.631	1300.309	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	23.400	18.810	17.556	16.302	15.048	13.794	104.910
TAX SAVINGS	0.	9.510	8.653	10.768	9.806	9.229	8.653	56.619
NET COMPLIANCE MEASURE COST	0.	13.890	10.157	6.788	6.496	5.819	5.141	48.291
AVERAGE ANNUAL NET COST		8.049						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 34.010	COHORT1 40.781	COHORT2 37.074	COHORT3 33.703	COHORT4 30.639	COHORT5 27.854	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 15. 1000 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	15.750	12.825	11.970	11.115	10.260	9.405	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2364.250	2367.175	2368.030	2368.885	2369.740	2370.595	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	8.550	8.550	8.550	8.550	8.550	
(-) DEPRECIATION	0.	0.	8.550	12.540	11.970	11.970	11.970	
TAXABLE INCOME	2380.000	2378.500	2367.175	2364.040	2365.465	2366.320	2367.175	
GROSS TAX	1074.550	1073.860	1068.650	1067.208	1067.864	1068.257	1068.650	
INVESTMENT TAX CREDIT	0.	5.700	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1068.160	1068.650	1067.208	1067.864	1068.257	1068.650	
NET INCOME	1305.450	1296.090	1298.524	1300.822	1301.021	1301.483	1301.945	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	15.750	12.825	11.970	11.115	10.260	9.405	71.325
TAX SAVINGS	0.	6.390	5.899	7.342	6.686	6.293	5.899	38.509
NET COMPLIANCE MEASURE COST	0.	9.360	6.926	4.628	4.429	3.967	3.506	32.816
AVERAGE ANNUAL NET COST		5.469						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 23.097	COHORT1 27.695	COHORT2 25.177	COHORT3 22.888	COHORT4 20.808	COHORT5 18.916	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 15. 1000 MICROWATTS PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	21.000	17.100	15.960	14.820	13.680	12.540	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2359.000	2362.900	2364.040	2365.180	2366.320	2367.460	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	11.400	11.400	11.400	11.400	11.400	
(-) DEPRECIATION	0.	0.	11.400	16.720	15.960	15.960	15.960	
TAXABLE INCOME	2380.000	2378.000	2362.900	2358.720	2360.620	2361.760	2362.900	
GROSS TAX	1074.550	1073.630	1066.684	1064.761	1065.635	1066.160	1066.684	
INVESTMENT TAX CREDIT	0.	7.600	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1066.030	1066.684	1064.761	1065.635	1066.160	1066.684	
NET INCOME	1305.450	1292.970	1296.216	1299.279	1299.545	1300.160	1300.776	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	21.000	17.100	15.960	14.820	13.680	12.540	95.100
TAX SAVINGS	0.	8.520	7.866	9.789	8.915	8.390	7.866	51.346
NET COMPLIANCE MEASURE COST	0.	12.480	9.234	6.171	5.905	5.290	4.674	43.754
AVERAGE ANNUAL NET COST		7.292						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 30.796	COHORT1 36.926	COHORT2 33.569	COHORT3 30.518	COHORT4 27.743	COHORT5 25.221	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 15. 1000 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	23.400	18.810	17.556	16.302	15.048	13.794	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2356.600	2361.190	2362.444	2363.698	2364.952	2366.206	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	12.540	12.540	12.540	12.540	12.540	
(-) DEPRECIATION	0.	0.	12.540	18.392	17.556	17.556	17.556	
TAXABLE INCOME	2380.000	2377.500	2361.190	2356.592	2358.682	2359.936	2361.190	
GROSS TAX	1074.550	1073.400	1065.897	1063.782	1064.744	1065.321	1065.897	
INVESTMENT TAX CREDIT	0.	8.360	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1065.040	1065.897	1063.782	1064.744	1065.321	1065.897	
NET INCOME	1305.450	1291.560	1295.293	1298.662	1298.954	1299.631	1300.309	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	23.400	18.810	17.556	16.302	15.048	13.794	104.910
TAX SAVINGS	0.	9.510	8.653	10.768	9.806	9.229	8.653	56.619
NET COMPLIANCE MEASURE COST	0.	13.890	10.157	6.788	6.496	5.819	5.141	48.291
AVERAGE ANNUAL NET COST		8.049						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 34.010	COHORT1 40.781	COHORT2 37.074	COHORT3 33.703	COHORT4 30.639	COHORT5 27.854	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 16. 2000 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.500	0.	0.	0.	0.	0.	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2378.500	2380.000	2380.000	2380.000	2380.000	2380.000	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.	0.	0.	0.	0.	
(-) DEPRECIATION	0.	0.	0.	0.	0.	0.	0.	
TAXABLE INCOME	2380.000	2378.500	2380.000	2380.000	2380.000	2380.000	2380.000	
GROSS TAX	1074.550	1073.860	1074.550	1074.550	1074.550	1074.550	1074.550	
INVESTMENT TAX CREDIT	0.	0.	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1073.860	1074.550	1074.550	1074.550	1074.550	1074.550	
NET INCOME	1305.450	1304.640	1305.450	1305.450	1305.450	1305.450	1305.450	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.500	0.	0.	0.	0.	0.	1.500
TAX SAVINGS	0.	0.690	0.	0.	0.	0.	0.	0.690
NET COMPLIANCE MEASURE COST	0.	0.810	0.	0.	0.	0.	0.	0.810
AVERAGE ANNUAL NET COST		0.135						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 0.676	COHORT1 0.810	COHORT2 0.736	COHORT3 0.669	COHORT4 0.609	COHORT5 0.553	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 16. 2000 MICROWATTS PER SQ. CM MEDIUM COST

			TIME PERIOD					
	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.000	0.	0.	0.	0.	0.	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2378.000	2380.000	2380.000	2380.000	2380.000	2380.000	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.	0.	0.	0.	0.	
(-) DEPRECIATION	0.	0.	0.	0.	0.	0.	0.	
TAXABLE INCOME	2380.000	2378.000	2380.000	2380.000	2380.000	2380.000	2380.000	
GROSS TAX	1074.550	1073.630	1074.550	1074.550	1074.550	1074.550	1074.550	
INVESTMENT TAX CREDIT	0.	0.	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1073.630	1074.550	1074.550	1074.550	1074.550	1074.550	
NET INCOME	1305.450	1304.370	1305.450	1305.450	1305.450	1305.450	1305.450	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.000	0.	0.	0.	0.	0.	2.000
TAX SAVINGS	0.	0.920	0.	0.	0.	0.	0.	0.920
NET COMPLIANCE MEASURE COST	0.	1.080	0.	0.	0.	0.	0.	1.080
AVERAGE ANNUAL NET COST		0.180						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 0.901	COHORT1 1.080	COHORT2 0.982	COHORT3 0.893	COHORT4 0.811	COHORT5 0.738	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 16. 2000 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.500	0.	0.	0.	0.	0.	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2377.500	2380.000	2380.000	2380.000	2380.000	2380.000	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.	0.	0.	0.	0.	
(-) DEPRECIATION	0.	0.	0.	0.	0.	0.	0.	
TAXABLE INCOME	2380.000	2377.500	2380.000	2380.000	2380.000	2380.000	2380.000	
GROSS TAX	1074.550	1073.400	1074.550	1074.550	1074.550	1074.550	1074.550	
INVESTMENT TAX CREDIT	0.	0.	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1073.400	1074.550	1074.550	1074.550	1074.550	1074.550	
NET INCOME	1305.450	1304.100	1305.450	1305.450	1305.450	1305.450	1305.450	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.500	0.	0.	0.	0.	0.	2.500
TAX SAVINGS	0.	1.150	0.	0.	0.	0.	0.	1.150
NET COMPLIANCE MEASURE COST	0.	1.350	0.	0.	0.	0.	0.	1.350
AVERAGE ANNUAL NET COST		0.225						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.126	COHORT1 1.350	COHORT2 1.227	COHORT3 1.116	COHORT4 1.014	COHORT5 0.922	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 17. 5000 MICROWATTS PER SQ. CM LOW COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.500	0.	0.	0.	0.	0.	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2378.500	2380.000	2380.000	2380.000	2380.000	2380.000	
TAX PURPOSE ADJUSTMENT TO								
(+) AMORTIZATION	0.	0.	0.	0.	0.	0.	0.	
(-) DEPRECIATION	0.	0.	0.	0.	0.	0.	0.	
TAXABLE INCOME	2380.000	2378.500	2380.000	2380.000	2380.000	2380.000	2380.000	
GROSS TAX	1074.550	1073.860	1074.550	1074.550	1074.550	1074.550	1074.550	
INVESTMENT TAX CREDIT	0.	0.	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1073.860	1074.550	1074.550	1074.550	1074.550	1074.550	
NET INCOME	1305.450	1304.640	1305.450	1305.450	1305.450	1305.450	1305.450	
NET COST OF COMPLIANCE								
GROSS COMPLIANCE MEASURE COST	0.	1.500	0.	0.	0.	0.	0.	1.500
TAX SAVINGS	0.	0.690	0.	0.	0.	0.	0.	0.690
NET COMPLIANCE MEASURE COST	0.	0.810	0.	0.	0.	0.	0.	0.810
AVERAGE ANNUAL NET COST		0.135						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 0.676	COHORT1 0.810	COHORT2 0.736	COHORT3 0.669	COHORT4 0.609	COHORT5 0.553	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 17. 5000 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.000	0.	0.	0.	0.	0.	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2378.000	2380.000	2380.000	2380.000	2380.000	2380.000	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.	0.	0.	0.	0.	
(-) DEPRECIATION	0.	0.	0.	0.	0.	0.	0.	
TAXABLE INCOME	2380.000	2378.000	2380.000	2380.000	2380.000	2380.000	2380.000	
GROSS TAX	1074.550	1073.630	1074.550	1074.550	1074.550	1074.550	1074.550	
INVESTMENT TAX CREDIT	0.	0.	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1073.630	1074.550	1074.550	1074.550	1074.550	1074.550	
NET INCOME	1305.450	1304.370	1305.450	1305.450	1305.450	1305.450	1305.450	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.000	0.	0.	0.	0.	0.	2.000
TAX SAVINGS	0.	0.920	0.	0.	0.	0.	0.	0.920
NET COMPLIANCE MEASURE COST	0.	1.080	0.	0.	0.	0.	0.	1.080
AVERAGE ANNUAL NET COST		0.180						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 0.901	COHORT1 1.080	COHORT2 0.982	COHORT3 0.893	COHORT4 0.811	COHORT5 0.738	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 17. 5000 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.500	0.	0.	0.	0.	0.	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2377.500	2380.000	2380.000	2380.000	2380.000	2380.000	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.	0.	0.	0.	0.	
(-) DEPRECIATION	0.	0.	0.	0.	0.	0.	0.	
TAXABLE INCOME	2380.000	2377.500	2380.000	2380.000	2380.000	2380.000	2380.000	
GROSS TAX	1074.550	1073.400	1074.550	1074.550	1074.550	1074.550	1074.550	
INVESTMENT TAX CREDIT	0.	0.	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1073.400	1074.550	1074.550	1074.550	1074.550	1074.550	
NET INCOME	1305.450	1304.100	1305.450	1305.450	1305.450	1305.450	1305.450	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.500	0.	0.	0.	0.	0.	2.500
TAX SAVINGS	0.	1.150	0.	0.	0.	0.	0.	1.150
NET COMPLIANCE MEASURE COST	0.	1.350	0.	0.	0.	0.	0.	1.350
AVERAGE ANNUAL NET COST		0.225						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.126	COHORT1 1.350	COHORT2 1.227	COHORT3 1.116	COHORT4 1.014	COHORT5 0.922	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 18. 10000 MICROWATTS PER SQ. CM

LOW COST

TIME PERIOD

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	1.500	0.	0.	0.	0.	0.	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2378.500	2380.000	2380.000	2380.000	2380.000	2380.000	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.	0.	0.	0.	0.	
(-) DEPRECIATION	0.	0.	0.	0.	0.	0.	0.	
TAXABLE INCOME	2380.000	2378.500	2380.000	2380.000	2380.000	2380.000	2380.000	
GROSS TAX	1074.550	1073.860	1074.550	1074.550	1074.550	1074.550	1074.550	
INVESTMENT TAX CREDIT	0.	0.	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1073.860	1074.550	1074.550	1074.550	1074.550	1074.550	
NET INCOME	1305.450	1304.640	1305.450	1305.450	1305.450	1305.450	1305.450	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	1.500	0.	0.	0.	0.	0.	1.500
TAX SAVINGS	0.	0.690	0.	0.	0.	0.	0.	0.690
NET COMPLIANCE MEASURE COST	0.	0.810	0.	0.	0.	0.	0.	0.810
AVERAGE ANNUAL NET COST		0.135						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 0.676	COHORT1 0.810	COHORT2 0.736	COHORT3 0.669	COHORT4 0.609	COHORT5 0.553	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 18. 10000 MICROWATTS PER SQ. CM MEDIUM COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.000	0.	0.	0.	0.	0.	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2378.000	2380.000	2380.000	2380.000	2380.000	2380.000	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.	0.	0.	0.	0.	
(-) DEPRECIATION	0.	0.	0.	0.	0.	0.	0.	
TAXABLE INCOME	2380.000	2378.000	2380.000	2380.000	2380.000	2380.000	2380.000	
GROSS TAX	1074.550	1073.630	1074.550	1074.550	1074.550	1074.550	1074.550	
INVESTMENT TAX CREDIT	0.	0.	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1073.630	1074.550	1074.550	1074.550	1074.550	1074.550	
NET INCOME	1305.450	1304.370	1305.450	1305.450	1305.450	1305.450	1305.450	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.000	0.	0.	0.	0.	0.	2.000
TAX SAVINGS	0.	0.920	0.	0.	0.	0.	0.	0.920
NET COMPLIANCE MEASURE COST	0.	1.080	0.	0.	0.	0.	0.	1.080
AVERAGE ANNUAL NET COST		0.180						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 0.901	COHORT1 1.080	COHORT2 0.982	COHORT3 0.893	COHORT4 0.811	COHORT5 0.738	

TABLE F-3. (CONTINUED)

GUIDANCE LEVEL 18. 10000 MICROWATTS PER SQ. CM HIGH COST

	PRE-GUIDELINE	GUIDELINE IMPOSED ON FIRM 0	TIME PERIOD 1	2	3	4	5	TOTAL COSTS
NET OPERATING INCOME BEFORE TAXES	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	2380.000	
COMPLIANCE MEASURE GROSS CASH FLOW COST	0.	2.500	0.	0.	0.	0.	0.	
OPERATING INCOME AFTER COMPLIANCE EXPENDITURES	2380.000	2377.500	2380.000	2380.000	2380.000	2380.000	2380.000	
TAX PURPOSE ADJUSTMENT TO (+) AMORTIZATION	0.	0.	0.	0.	0.	0.	0.	
(-) DEPRECIATION	0.	0.	0.	0.	0.	0.	0.	
TAXABLE INCOME	2380.000	2377.500	2380.000	2380.000	2380.000	2380.000	2380.000	
GROSS TAX	1074.550	1073.400	1074.550	1074.550	1074.550	1074.550	1074.550	
INVESTMENT TAX CREDIT	0.	0.	0.	0.	0.	0.	0.	
NET TAXES	1074.550	1073.400	1074.550	1074.550	1074.550	1074.550	1074.550	
NET INCOME	1305.450	1304.100	1305.450	1305.450	1305.450	1305.450	1305.450	
NET COST OF COMPLIANCE GROSS COMPLIANCE MEASURE COST	0.	2.500	0.	0.	0.	0.	0.	2.500
TAX SAVINGS	0.	1.150	0.	0.	0.	0.	0.	1.150
NET COMPLIANCE MEASURE COST	0.	1.350	0.	0.	0.	0.	0.	1.350
AVERAGE ANNUAL NET COST		0.225						
PRESENT VALUE OF THE NET COST OF COMPLIANCE		AVERAGE 1.126	COHORT1 1.350	COHORT2 1.227	COHORT3 1.116	COHORT4 1.014	COHORT5 0.922	

TABLE F-4. THE NUMBER OF TV BROADCAST STATIONS AFFECTED BY GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION IS GIVEN FOR 18 SPECIFIED GUIDANCE LEVELS.

	GUIDANCE LEVEL	
1	1 MICROWATTS PER SQ. CM	819
2	10 MICROWATTS PER SQ. CM	246
3	20 MICROWATTS PER SQ. CM	183
4	50 MICROWATTS PER SQ. CM	102
5	75 MICROWATTS PER SQ. CM	73
6	100 MICROWATTS PER SQ. CM	60
7	200 MICROWATTS PER SQ. CM	30
8	300 MICROWATTS PER SQ. CM	19
9	400 MICROWATTS PER SQ. CM	13
10	500 MICROWATTS PER SQ. CM	10
11	600 MICROWATTS PER SQ. CM	5
12	700 MICROWATTS PER SQ. CM	4
13	800 MICROWATTS PER SQ. CM	3
14	900 MICROWATTS PER SQ. CM	3
15	1000 MICROWATTS PER SQ. CM	2
16	2000 MICROWATTS PER SQ. CM	0
17	5000 MICROWATTS PER SQ. CM	0
18	10000 MICROWATTS PER SQ. CM	0

APPENDIX G

TOTAL COST ESTIMATES: FM, AM, TV

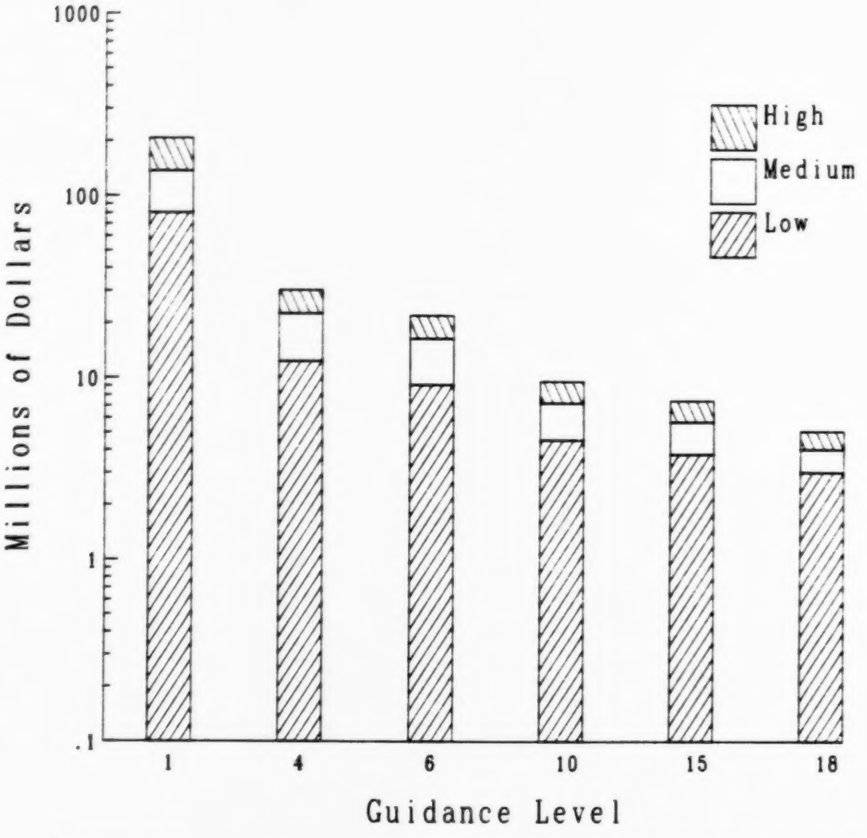

Figure G-1. The range of annual cash flow (current year dollar) cost to society-at-large of guidelines limiting public exposure to radiofrequency radiation from AM, FM, and TV broadcast sources is shown for 6 of 18 guidance levels studied.

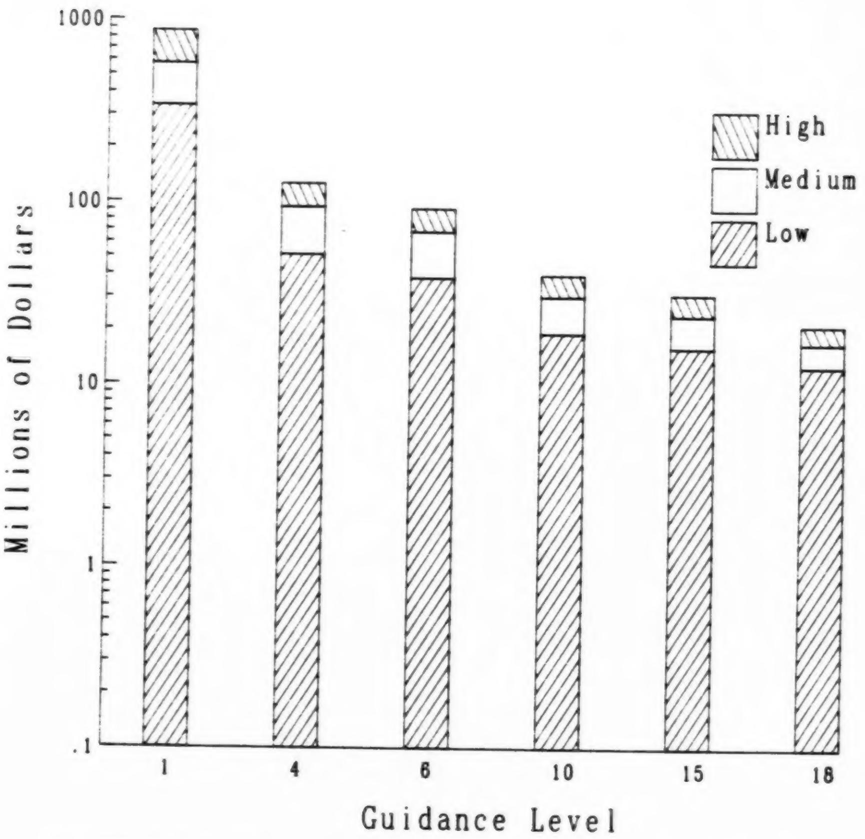

Figure G-2. The range of total present value (constant dollar) costs to society-at-large of guidelines limiting public exposure to radiofrequency radiation from AM, FM, and TV broadcast sources is shown for 6 of 18 guidance levels studied.

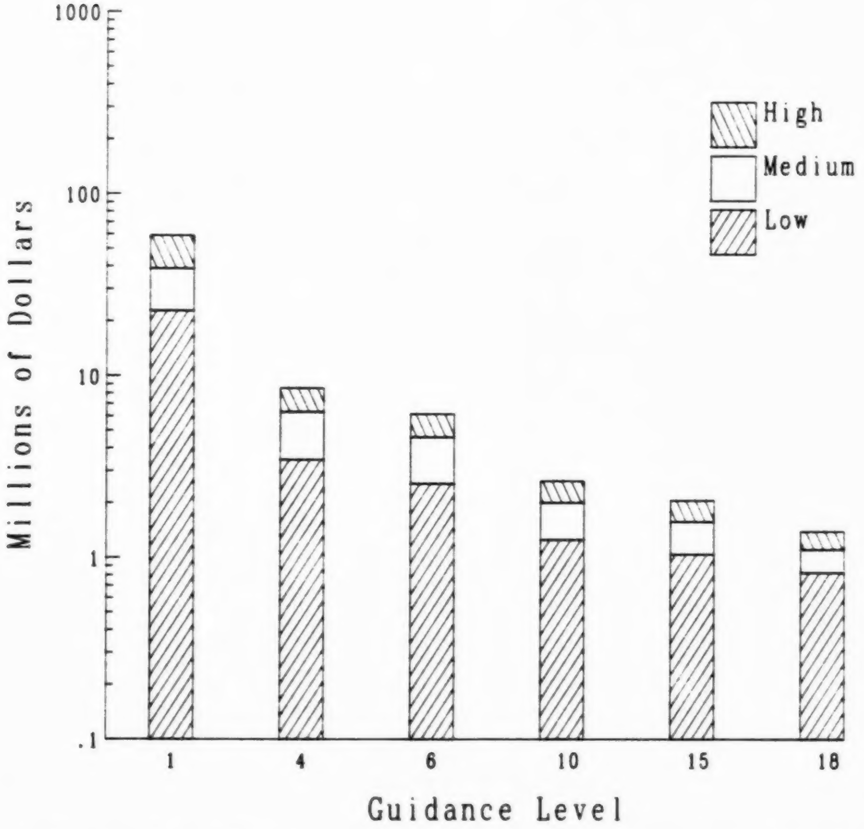

Figure G-3. The range of average annual net after-tax cash flow (current year dollar) cost to the broadcast industry of guidelines limiting public exposure to radiofrequency radiation from AM, FM, and TV broadcast sources is shown for 6 of 18 guidance levels studied.

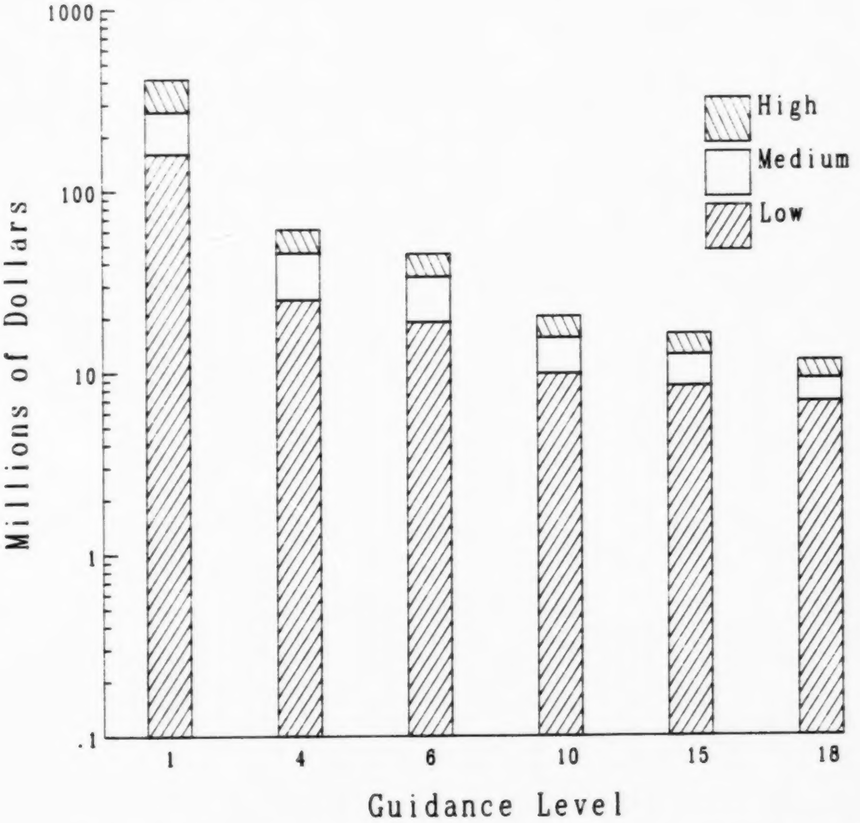

Figure G-4. The range of the total present (constant dollar) value of the net after-tax cost to the broadcast industry of guidelines limiting public exposure to radiofrequency radiation from AM, FM, and TV broadcast sources is shown for 6 of 18 guidance levels studied.

TABLE G-1. AN ESTIMATE OF THE POTENTIAL COST TO THE SOCIETY-AT-LARGE OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM AM, FM, VHF-TV, AND UHF-TV BROADCAST SOURCES IS GIVEN FOR 3 COST LEVELS. THE ANNUAL CASH FLOW (CURRENT YEAR DOLLAR) COST AND THE PRESENT (CONSTANT DOLLAR) VALUE ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT FM STATIONS SELECT ONE OF FIVE COMPLIANCE MEASURES (2 THROUGH 6) AND THAT COMPLIANCE COSTS (ANNUAL CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN MILLIONS OF DOLLARS. MICROWATTS PER SQ. CM IS ABBREVIATED UW/CM^2; VOLTS PER METER, V/M.

	FM			AM			TV			TOTAL		
GUIDANCE LEVEL	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
1.		1. UW/CM^2			10. V/M			1. UW/CM^2				
ANNUAL CASH FLOW COST	30.0	51.5	73.3	5.3	9.7	15.7	45.6	76.0	118.9	80.9	137.2	207.8
PRESENT VALUE	125.1	214.7	305.5	22.2	40.5	65.4	190.2	317.0	495.7	337.5	572.2	866.6
2.		10. UW/CM^2			32. V/M			10. UW/CM^2				
ANNUAL CASH FLOW COST	13.0	28.0	39.4	3.0	5.1	7.8	10.8	16.9	20.5	26.8	49.9	67.7
PRESENT VALUE	54.3	116.6	164.3	12.5	21.1	32.3	45.1	70.5	85.5	111.8	208.2	282.2
3.		20. UW/CM^2			45. V/M			20. UW/CM^2				
ANNUAL CASH FLOW COST	10.4	21.9	30.5	2.7	4.4	6.7	7.0	10.3	12.0	20.0	36.5	49.1
PRESENT VALUE	43.2	91.3	127.1	11.1	18.4	27.8	29.3	42.8	50.1	83.6	152.4	204.9
4.		50. UW/CM^2			71. V/M			50. UW/CM^2				
ANNUAL CASH FLOW COST	6.9	14.3	19.6	2.3	3.8	5.6	3.1	4.5	5.2	12.4	22.6	30.4
PRESENT VALUE	28.8	59.5	81.6	9.8	15.7	23.3	13.0	18.9	21.9	51.6	94.1	126.7
5.		75. UW/CM^2			87. V/M			75. UW/CM^2				
ANNUAL CASH FLOW COST	5.9	12.0	16.4	2.3	3.6	5.3	2.1	3.0	3.4	10.2	18.5	25.0
PRESENT VALUE	24.5	49.9	68.2	9.4	15.0	22.0	8.7	12.3	14.0	42.6	77.2	104.1

TABLE G-1. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV			TOTAL		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
6.		100. UW/CM^2			100. V/M			100. UW/CM^2				
ANNUAL CASH FLOW COST	5.3	10.7	14.5	2.2	3.4	5.0	1.7	2.3	2.6	9.2	16.5	22.1
PRESENT VALUE	22.2	44.7	60.4	9.1	14.3	20.9	7.1	9.8	11.0	38.4	68.8	92.3
7.		200. UW/CM^2			141. V/M			200. UW/CM^2				
ANNUAL CASH FLOW COST	3.9	7.5	10.0	2.1	3.2	4.6	0.8	1.1	1.3	6.8	11.8	15.9
PRESENT VALUE	16.2	31.2	41.6	8.6	13.4	19.3	3.5	4.7	5.4	28.3	49.3	66.3
8.		300. UW/CM^2			173. V/M			300. UW/CM^2				
ANNUAL CASH FLOW COST	3.2	5.9	7.8	2.0	3.0	4.2	0.6	0.8	1.0	5.8	9.7	13.0
PRESENT VALUE	13.3	24.7	32.7	8.1	12.4	17.7	2.6	3.4	4.0	24.0	40.6	54.4
9.		400. UW/CM^2			200. V/M			400. UW/CM^2				
ANNUAL CASH FLOW COST	2.7	4.8	6.3	1.9	3.0	4.2	0.5	0.7	0.8	5.1	8.4	11.3
PRESENT VALUE	11.1	19.9	26.2	8.1	12.3	17.5	2.2	2.9	3.5	21.4	35.1	47.1
10.		500. UW/CM^2			224. V/M			500. UW/CM^2				
ANNUAL CASH FLOW COST	2.4	4.3	5.6	1.7	2.4	3.3	0.5	0.6	0.8	4.6	7.3	9.6
PRESENT VALUE	10.2	17.8	23.3	7.0	10.1	13.7	2.0	2.6	3.2	19.1	30.5	40.1

TABLE G-1. (CONTINUED)

	FM			AM			TV			TOTAL		
GUIDANCE LEVEL	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
11.		600. UW/CM^-2			245. V/M			600. UW/CM^-2				
ANNUAL CASH FLOW COST	2.2	3.8	5.0	1.7	2.4	3.2	0.4	0.5	0.6	4.3	6.7	8.9
PRESENT VALUE	9.4	16.0	20.8	6.9	10.0	13.5	1.6	2.1	2.6	17.9	28.1	36.9
12.		700. UW/CM^-2			265. V/M			700. UW/CM^-2				
ANNUAL CASH FLOW COST	2.1	3.4	4.5	1.6	2.4	3.2	0.4	0.5	0.6	4.1	6.3	8.3
PRESENT VALUE	8.6	14.3	18.6	6.8	9.8	13.3	1.5	2.1	2.5	17.0	26.2	34.4
13.		800. UW/CM^-2			282. V/M			800. UW/CM^-2				
ANNUAL CASH FLOW COST	2.0	3.3	4.2	1.6	2.3	3.2	0.4	0.5	0.6	4.0	6.1	8.0
PRESENT VALUE	8.3	13.7	17.7	6.8	9.8	13.2	1.5	2.0	2.5	16.6	25.5	33.4
14.		900. UW/CM^-2			300. V/M			900. UW/CM^-2				
ANNUAL CASH FLOW COST	1.9	3.1	4.0	1.6	2.3	3.2	0.4	0.5	0.6	3.9	5.9	7.8
PRESENT VALUE	8.0	12.9	16.7	6.8	9.8	13.2	1.5	2.0	2.5	16.3	24.7	32.4
15.		1000. UW/CM^-2			316. V/M			1000. UW/CM^-2				
ANNUAL CASH FLOW COST	1.9	3.0	3.8	1.6	2.3	3.1	0.3	0.5	0.6	3.8	5.8	7.6
PRESENT VALUE	7.8	12.4	16.0	6.8	9.8	13.1	1.4	1.9	2.4	16.0	24.1	31.5

TABLE G-1. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV			TOTAL		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
16.		2000. UW/CM-2			447. V/M			2000. UW/CM-2				
ANNUAL CASH FLOW COST	1.6	2.3	2.9	1.6	2.3	3.1	0.3	0.4	0.5	3.5	5.0	6.6
PRESENT VALUE	6.5	9.6	12.2	6.7	9.6	12.8	1.4	1.8	2.3	14.6	21.0	27.3
17.		5000. UW/CM-2			708. V/M			5000. UW/CM-2				
ANNUAL CASH FLOW COST	1.4	1.9	2.4	1.4	2.0	2.5	0.3	0.4	0.5	3.1	4.3	5.4
PRESENT VALUE	5.7	7.8	9.8	6.0	8.2	10.4	1.4	1.8	2.3	13.1	17.8	22.5
18.		10000. UW/CM-2			1000. V/M			10000. UW/CM-2				
ANNUAL CASH FLOW COST	1.3	1.8	2.2	1.4	1.9	2.4	0.3	0.4	0.5	3.1	4.1	5.2
PRESENT VALUE	5.5	7.4	9.2	5.9	7.9	10.0	1.4	1.8	2.3	12.7	17.1	21.5

TABLE G-2. AN ESTIMATE OF THE POTENTIAL COST TO THE BROADCAST INDUSTRY OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM AM, FM, VHF-TV, AND UHF-TV BROADCAST SOURCES IS GIVEN FOR 3 COST LEVELS. THE AVERAGE ANNUAL CASH FLOW (CURRENT YEAR DOLLAR) COSTS AND THE PRESENT (CONSTANT DOLLAR) VALUE ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT FM STATIONS SELECT ONE OF FIVE COMPLIANCE MEASURES (2 THROUGH 6) AND THAT COMPLIANCE COSTS (ANNUAL NET CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN MILLIONS OF DOLLARS.
MICROWATTS PER SQ. CM IS ABBREVIATED UW/CM-2, VOLTS PER METER, V/M.

	FM			AM			TV			TOTAL		
GUIDANCE LEVEL	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
1.		1. UW/CM-2			10. V/M			1. UW/CM-2				
AVG ANNUAL CASH FLOW	8.5	14.8	21.3	1.5	2.7	4.4	12.8	21.3	33.4	22.8	38.8	59.1
PRESENT VALUE	59.9	103.7	149.1	10.9	19.6	31.5	89.8	149.6	233.9	160.5	273.0	414.6
2.		10. UW/CM-2			32. V/M			10. UW/CM-2				
AVG ANNUAL CASH FLOW	3.7	7.9	11.2	0.8	1.4	2.2	3.0	4.7	5.8	7.5	14.1	19.1
PRESENT VALUE	26.1	56.0	79.2	6.3	10.5	15.9	21.3	33.4	40.5	53.7	99.8	135.6
3.		20. UW/CM-2			45. V/M			20. UW/CM-2				
AVG ANNUAL CASH FLOW	2.9	6.2	8.7	0.7	1.2	1.8	2.0	2.9	3.4	5.6	10.3	13.9
PRESENT VALUE	20.8	43.9	61.2	5.6	9.2	13.8	13.9	20.3	23.8	40.4	73.3	98.8
4.		50. UW/CM-2			71. V/M			50. UW/CM-2				
AVG ANNUAL CASH FLOW	1.9	4.0	5.5	0.6	1.0	1.5	0.9	1.3	1.5	3.4	6.3	8.5
PRESENT VALUE	14.0	28.7	39.4	5.0	7.9	11.6	6.2	9.1	10.5	25.2	45.7	61.5
5.		75. UW/CM-2			87. V/M			75. UW/CM-2				
AVG ANNUAL CASH FLOW	1.6	3.4	4.6	0.6	1.0	1.5	0.6	0.8	0.9	2.8	5.2	7.0
PRESENT VALUE	12.0	24.1	33.0	4.8	7.6	11.0	4.2	5.9	6.8	21.0	37.7	50.8

TABLE G-2. (CONTINUED)

GUIDANCE LEVEL	FM LOW	FM MED	FM HIGH	AM LOW	AM MED	AM HIGH	TV LOW	TV MED	TV HIGH	TOTAL LOW	TOTAL MED	TOTAL HIGH
6.		100. UW/CM^2			100. V/M			100. UW/CM^2				
AVG ANNUAL CASH FLOW	1.5	3.0	4.1	0.6	0.9	1.4	0.5	0.7	0.7	2.6	4.6	6.2
PRESENT VALUE	10.9	21.7	29.2	4.7	7.3	10.5	3.4	4.7	5.4	19.0	33.7	45.1
7.		200. UW/CM^2			141. V/M			200. UW/CM^2				
AVG ANNUAL CASH FLOW	1.1	2.1	2.8	0.6	0.9	1.3	0.2	0.3	0.4	1.9	3.3	4.4
PRESENT VALUE	8.0	15.2	20.3	4.5	6.8	9.8	1.7	2.3	2.7	14.2	24.4	32.8
8.		300. UW/CM^2			173. V/M			300. UW/CM^2				
AVG ANNUAL CASH FLOW	0.9	1.6	2.2	0.5	0.8	1.2	0.2	0.2	0.3	1.6	2.7	3.6
PRESENT VALUE	6.6	12.2	16.0	4.2	6.4	9.0	1.3	1.7	2.1	12.2	20.3	27.1
9.		400. UW/CM^2			200. V/M			400. UW/CM^2				
AVG ANNUAL CASH FLOW	0.7	1.3	1.7	0.5	0.8	1.2	0.1	0.2	0.2	1.4	2.3	3.1
PRESENT VALUE	5.6	9.9	13.0	4.2	6.3	8.9	1.1	1.5	1.8	11.0	17.7	23.7
10.		500. UW/CM^2			224. V/M			500. UW/CM^2				
AVG ANNUAL CASH FLOW	0.7	1.2	1.5	0.5	0.7	0.9	0.1	0.2	0.2	1.3	2.0	2.6
PRESENT VALUE	5.2	8.9	11.6	3.7	5.3	7.1	1.0	1.4	1.7	9.9	15.5	20.4

TABLE G-2. (CONTINUED)

GUIDANCE LEVEL	FM LOW	FM MED	FM HIGH	AM LOW	AM MED	AM HIGH	TV LOW	TV MED	TV HIGH	TOTAL LOW	TOTAL MED	TOTAL HIGH
11.		600. UW/CM^2			245. V/M			600. UW/CM^2				
AVG ANNUAL CASH FLOW	0.6	1.1	1.4	0.5	0.7	0.9	0.1	0.1	0.2	1.2	1.8	2.4
PRESENT VALUE	4.8	8.0	10.4	3.7	5.2	7.0	0.8	1.1	1.4	9.3	14.4	18.9
12.		700. UW/CM^2			265. V/M			700. UW/CM^2				
AVG ANNUAL CASH FLOW	0.6	0.9	1.2	0.4	0.6	0.9	0.1	0.1	0.2	1.1	1.7	2.3
PRESENT VALUE	4.4	7.3	9.4	3.6	5.2	6.9	0.8	1.1	1.3	8.9	13.5	17.7
13.		800. UW/CM^2			282. V/M			800. UW/CM^2				
AVG ANNUAL CASH FLOW	0.5	0.9	1.2	0.4	0.6	0.9	0.1	0.1	0.2	1.1	1.7	2.2
PRESENT VALUE	4.3	6.9	9.0	3.6	5.1	6.9	0.8	1.1	1.3	8.7	13.2	17.2
14.		900. UW/CM^2			300. V/M			900. UW/CM^2				
AVG ANNUAL CASH FLOW	0.5	0.9	1.1	0.4	0.6	0.9	0.1	0.1	0.2	1.1	1.6	2.1
PRESENT VALUE	4.1	6.6	8.5	3.6	5.1	6.9	0.8	1.1	1.3	8.6	12.8	16.7
15.		1000. UW/CM^2			316. V/M			1000. UW/CM^2				
AVG ANNUAL CASH FLOW	0.5	0.8	1.1	0.4	0.6	0.9	0.1	0.1	0.2	1.0	1.6	2.1
PRESENT VALUE	4.0	6.4	8.2	3.6	5.1	6.8	0.8	1.0	1.3	8.4	12.5	16.3

TABLE G-2. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV			TOTAL		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
16.		2000. UW/CM^2			447. V/M			2000. UW/CM^2				
AVG ANNUAL CASH FLOW	0.4	0.6	0.8	0.4	0.6	0.8	0.1	0.1	0.1	0.9	1.4	1.8
PRESENT VALUE	3.4	5.0	6.4	3.6	5.1	6.7	0.7	1.0	1.2	7.7	11.1	14.3
17.		5000. UW/CM^2			708. V/M			5000. UW/CM^2				
AVG ANNUAL CASH FLOW	0.4	0.5	0.6	0.4	0.5	0.7	0.1	0.1	0.1	0.8	1.2	1.5
PRESENT VALUE	3.1	4.2	5.3	3.2	4.4	5.6	0.7	1.0	1.2	7.0	9.5	12.1
18.		10000. UW/CM^2			1000. V/M			10000. UW/CM^2				
AVG ANNUAL CASH FLOW	0.4	0.5	0.6	0.4	0.5	0.6	0.1	0.1	0.1	0.8	1.1	1.4
PRESENT VALUE	3.0	4.0	5.0	3.2	4.3	5.4	0.7	1.0	1.2	6.9	9.2	11.6

TABLE G-3. AN ESTIMATE OF THE POTENTIAL COST TO THE AVERAGE BROADCAST STATION OF GUIDELINES LIMITING PUBLIC EXPOSURE TO RADIOFREQUENCY RADIATION FROM AM, FM, VHF-TV, AND UHF-TV BROADCAST SOURCES IS GIVEN FOR 3 COST LEVELS. THE AVERAGE ANNUAL CASH FLOW (CURRENT YEAR DOLLAR) COST, THE AVERAGE PRESENT (CONSTANT DOLLAR) VALUE OF THE NET AFTER TAX COST AND THE MAXIMUM AND AVERAGE PERCENT REDUCTION IN NET PROFIT ARE SHOWN FOR COMPLIANCE WITH 18 SPECIFIED GUIDANCE LEVELS. IT IS ASSUMED THAT FM STATIONS SELECT ONE OF FIVE COMPLIANCE MEASURES (2 THROUGH 6) AND THAT COMPLIANCE COSTS (ANNUAL NET CASH FLOW) ARE SPREAD EVENLY AMONG FIVE ANNUAL COHORTS OF STATIONS. NUMBERS ARE IN MILLIONS OF DOLLARS. MICROWATTS PER SQ. CM IS ABBREVIATED UW/CM^2; VOLTS PER METER, V/M.

	FM			AM			TV		
GUIDANCE LEVEL	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
1.		1. UW/CM^2			10. V/M			1. UW/CM^2	
AVG ANNUAL CASH FLOW	3.8	6.7	9.7	0.9	1.4	1.8	26.0	43.4	67.8
AVERAGE PRESENT VALUE	16.2	28.2	40.6	4.0	5.9	7.9	109.4	182.4	285.3
MAX PROFIT DROP (%)	7.0	11.7	16.4	2.7	3.9	5.1	3.2	5.4	8.4
AVG PROFIT DROP (%)	4.0	7.0	10.1	1.2	1.8	2.4	2.0	3.3	5.2
2.		10. UW/CM^2			32. V/M			10. UW/CM^2	
AVG ANNUAL CASH FLOW	1.9	4.2	6.0	0.5	0.7	0.9	20.1	31.5	38.2
AVERAGE PRESENT VALUE	8.1	17.7	25.1	2.0	2.9	3.9	84.5	132.7	160.8
MAX PROFIT DROP (%)	3.8	7.7	10.7	1.7	2.4	3.1	2.5	3.9	4.8
AVG PROFIT DROP (%)	2.0	4.4	6.2	0.6	0.9	1.1	1.5	2.4	2.9
3.		20. UW/CM^2			45. V/M			20. UW/CM^2	
AVG ANNUAL CASH FLOW	1.9	4.1	5.7	0.4	0.6	0.7	17.3	25.3	29.5
AVERAGE PRESENT VALUE	8.0	17.3	24.3	1.8	2.5	3.3	72.6	106.5	124.4
MAX PROFIT DROP (%)	3.8	7.6	10.5	1.6	2.2	2.9	2.2	3.2	3.7
AVG PROFIT DROP (%)	2.0	4.3	6.0	0.5	0.7	1.0	1.3	1.9	2.3
4.		50. UW/CM^2			71. V/M			50. UW/CM^2	
AVG ANNUAL CASH FLOW	1.8	3.9	5.4	0.3	0.5	0.6	12.9	19.0	21.8
AVERAGE PRESENT VALUE	7.7	16.5	22.9	1.5	2.1	2.8	54.5	80.1	91.8
MAX PROFIT DROP (%)	3.6	7.3	10.0	1.5	2.0	2.6	1.6	2.4	2.8
AVG PROFIT DROP (%)	1.9	4.1	5.7	0.4	0.6	0.8	1.0	1.5	1.7

TABLE G-3. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
5.		75. UW/CM^2			87. V/M			75. UW/CM^2	
AVG ANNUAL CASH FLOW	1.8	3.9	5.4	0.3	0.5	0.6	11.4	16.3	18.3
AVERAGE PRESENT VALUE	7.6	16.5	22.8	1.4	2.0	2.6	48.1	68.8	77.1
MAX PROFIT DROP (%)	3.6	7.3	9.9	1.4	2.0	2.5	1.4	2.1	2.3
AVG PROFIT DROP (%)	1.9	4.1	5.6	0.4	0.6	0.8	0.9	1.3	1.4
6.		100. UW/CM^2			100. V/M			100. UW/CM^2	
AVG ANNUAL CASH FLOW	1.8	3.8	5.2	0.3	0.4	0.6	10.8	15.1	16.7
AVERAGE PRESENT VALUE	7.5	16.1	22.0	1.4	2.0	2.6	45.6	63.7	70.3
MAX PROFIT DROP (%)	3.6	7.2	9.7	1.4	2.0	2.5	1.4	1.9	2.1
AVG PROFIT DROP (%)	1.8	4.0	5.4	0.4	0.6	0.8	0.8	1.2	1.3
7.		200. UW/CM^2			141. V/M			200. UW/CM^2	
AVG ANNUAL CASH FLOW	1.7	3.7	5.0	0.3	0.4	0.6	8.0	10.9	12.0
AVERAGE PRESENT VALUE	7.4	15.8	21.4	1.4	2.0	2.6	33.8	45.9	50.6
MAX PROFIT DROP (%)	3.5	7.1	9.5	1.4	2.0	2.5	1.0	1.4	1.5
AVG PROFIT DROP (%)	1.8	3.9	5.3	0.4	0.6	0.7	0.6	0.8	0.9
8.		300. UW/CM^2			173. V/M			300. UW/CM^2	
AVG ANNUAL CASH FLOW	1.7	3.7	4.9	0.3	0.4	0.5	7.3	9.8	10.8
AVERAGE PRESENT VALUE	7.2	15.5	20.9	1.3	1.9	2.4	30.9	41.2	45.5
MAX PROFIT DROP (%)	3.5	7.0	9.3	1.4	1.9	2.4	0.9	1.3	1.4
AVG PROFIT DROP (%)	1.8	3.8	5.2	0.4	0.5	0.7	0.6	0.7	0.8

TABLE G-3. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
9.		400. UW/CM^2			200. V/M			400. UW/CM^2	
AVG ANNUAL CASH FLOW	1.7	3.6	4.8	0.3	0.4	0.5	7.3	9.7	10.7
AVERAGE PRESENT VALUE	7.1	15.2	20.5	1.3	1.9	2.4	30.7	41.0	45.2
MAX PROFIT DROP (%)	3.4	6.8	9.1	1.4	1.9	2.4	0.9	1.3	1.4
AVG PROFIT DROP (%)	1.7	3.8	5.1	0.4	0.5	0.7	0.6	0.7	0.8
10.		500. UW/CM^2			224. V/M			500. UW/CM^2	
AVG ANNUAL CASH FLOW	1.7	3.6	4.8	0.3	0.4	0.5	7.2	9.7	10.6
AVERAGE PRESENT VALUE	7.1	15.2	20.4	1.3	1.9	2.4	30.5	40.7	44.9
MAX PROFIT DROP (%)	3.4	6.8	9.1	1.4	1.9	2.4	0.9	1.2	1.4
AVG PROFIT DROP (%)	1.7	3.7	5.0	0.4	0.5	0.7	0.6	0.7	0.8
11.		600. UW/CM^2			245. V/M			600. UW/CM^2	
AVG ANNUAL CASH FLOW	1.6	3.5	4.7	0.3	0.4	0.5	5.5	7.3	8.0
AVERAGE PRESENT VALUE	6.9	14.9	20.0	1.3	1.9	2.4	23.1	30.8	34.0
MAX PROFIT DROP (%)	3.3	6.7	8.9	1.4	1.9	2.4	0.7	1.0	1.1
AVG PROFIT DROP (%)	1.7	3.7	4.9	0.4	0.5	0.7	0.4	0.6	0.6
12.		700. UW/CM^2			265. V/M			700. UW/CM^2	
AVG ANNUAL CASH FLOW	1.6	3.4	4.5	0.3	0.4	0.5	5.5	7.3	8.0
AVERAGE PRESENT VALUE	6.7	14.3	19.3	1.3	1.9	2.4	23.1	30.8	34.0
MAX PROFIT DROP (%)	3.3	6.5	8.7	1.4	1.9	2.4	0.7	1.0	1.1
AVG PROFIT DROP (%)	1.6	3.5	4.8	0.4	0.5	0.7	0.4	0.6	0.6

TABLE G-3. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
13.		800. UW/CM^2			282. V/M			800. UW/CM^2	
AVG ANNUAL CASH FLOW	1.5	3.3	4.5	0.3	0.4	0.5	5.5	7.3	8.0
AVERAGE PRESENT VALUE	6.6	14.1	18.9	1.3	1.9	2.4	23.1	30.8	34.0
MAX PROFIT DROP (%)	3.2	6.4	8.5	1.4	1.9	2.4	0.7	1.0	1.1
AVG PROFIT DROP (%)	1.6	3.5	4.7	0.4	0.5	0.7	0.4	0.6	0.6
14.		900. UW/CM^2			300. V/M			900. UW/CM^2	
AVG ANNUAL CASH FLOW	1.5	3.3	4.4	0.3	0.4	0.5	5.5	7.3	8.0
AVERAGE PRESENT VALUE	6.5	14.0	18.8	1.3	1.9	2.4	23.1	30.8	34.0
MAX PROFIT DROP (%)	3.2	6.3	8.5	1.4	1.9	2.4	0.7	1.0	1.1
AVG PROFIT DROP (%)	1.6	3.4	4.6	0.4	0.5	0.7	0.4	0.6	0.6
15.		1000. UW/CM^2			316. V/M			1000. UW/CM^2	
AVG ANNUAL CASH FLOW	1.5	3.2	4.3	0.3	0.4	0.5	5.5	7.3	8.0
AVERAGE PRESENT VALUE	6.4	13.6	18.3	1.3	1.9	2.4	23.1	30.8	34.0
MAX PROFIT DROP (%)	3.1	6.2	8.3	1.4	1.9	2.4	0.7	1.0	1.1
AVG PROFIT DROP (%)	1.6	3.4	4.5	0.4	0.5	0.7	0.4	0.6	0.6
16.		2000. UW/CM^2			447. V/M			2000. UW/CM^2	
AVG ANNUAL CASH FLOW	1.4	2.9	3.9	0.3	0.4	0.5	0.1	0.2	0.2
AVERAGE PRESENT VALUE	5.8	12.3	16.5	1.3	1.8	2.4	0.7	0.9	1.1
MAX PROFIT DROP (%)	2.9	5.7	7.6	1.4	1.9	2.4	0.1	0.1	0.1
AVG PROFIT DROP (%)	1.4	3.0	4.1	0.4	0.5	0.7	0.0	0.0	0.0

TABLE G-3. (CONTINUED)

GUIDANCE LEVEL	FM			AM			TV		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
17.		5000. UW/CM^2			708. V/M			5000. UW/CM^2	
AVG ANNUAL CASH FLOW	1.2	2.4	3.3	0.3	0.4	0.5	0.1	0.2	0.2
AVERAGE PRESENT VALUE	5.0	10.4	14.0	1.3	1.8	2.3	0.7	0.9	1.1
MAX PROFIT DROP (%)	2.6	4.9	6.6	1.4	1.9	2.4	0.1	0.1	0.1
AVG PROFIT DROP (%)	1.2	2.6	3.4	0.4	0.5	0.7	0.0	0.0	0.0
18.		10000. UW/CM^2			1000. V/M			10000. UW/CM^2	
AVG ANNUAL CASH FLOW	1.1	2.3	3.2	0.3	0.4	0.5	0.1	0.2	0.2
AVERAGE PRESENT VALUE	4.8	10.0	13.5	1.3	1.8	2.3	0.7	0.9	1.1
MAX PROFIT DROP (%)	2.5	4.8	6.3	1.4	1.9	2.4	0.1	0.1	0.1
AVG PROFIT DROP (%)	1.2	2.4	3.3	0.4	0.5	0.7	0.0	0.0	0.0